

# The Mining Journal,

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2626.—Vol. LV.

LONDON, SATURDAY, DECEMBER 19, 1885.

PRICE ..... SIXPENCE.  
BY POST, £1 4s. PER ANNUM.

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,  
AND MINING SHARE DEALER,  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.**

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every week a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices.

### MINES INSPECTED.

**BANKERS:** CITY BANK, LONDON.—SOUTH CORNWALL BANK, St. Austell.  
Address for Telegrams—"CROFTS, LONDON." Telephone Number 1003.

**SPECIAL DEALINGS** in the following (or part):—

75 Albion Gold, 25s.	50 Gunnis, (Clt.), 3s. 6d.	75 Port Phillip, off. wtd.
75 Alameda, (pd.), 2s. 6d.	25 Hoover Hill, 3s. 6d.	25 Potosi, 11s. 6d.
50 Alameda (New), 4s. 6d.	30 Home Mines, 15s.	30 Panulillo, £2 17s. 6d.
25 Bedford United, 7s.	250 Indian Consol., 23s. 6d.	75 Prince of Wales, 7s. 6d.
50 Balkis, 5s.	50 Javali, 3s. 6d.	50 Pestana, 3s. 3d.
30 Birdseye, 27s. 6d.	25 Killifreth, 12s.	20 Rio Tinto, £11 2s. 6d.
30 Bratsberg, 12s.	25 Kim North Block, 27	50 Ruby (New), 3s. 9d.
50 Carn Camborne, 3s.	70 Kohinoor B., 4s.	30 Richmond, £4 11s. 3d.
70 Callao Bis, 17s. 6d.	50 La Plata, 6s. 6d.	20 Rom Gravel, £5 1/2.
2s. 9d.	30 La Trinidad, 4s.	30 Schwab's Gully, £3 10.
80 Cartago, fully paid,	25 Leadhills, £2 17s.	120 Shepherds United, 2s. 9
2s. 6d.	150 Lisbon-Berlyn (New),	100 Spitzkop, 14s.
80 Colombian Hydraulic,	3s. 6d.	30 So. Condurrow, £5 1/2.
9s.	25 Marke Valley, 2s. 6d.	50 So. Darren, 9s. to 11s.
15 Cape Copper, £27.	20 Mason-Barry, 4s.	80 Tacuahu, 1s. 6d.
100 California, 4s.	50 Montana, 3s. 11s. 3d.	60 Tamboracherry, 10s.
30 Colorado, £2 2s. 6d.	50 Montana, 3s. 11s. 3d.	20 Tolima A., 2s.
25 Chontales, 2s. 6d.	150 Mysore Reefs, 13s.	10 ditto B., £2 15s.
20 Copiapo, £3 7s. 6d.	80 New Chile, 18s. 6d.	30 Transvaal Gold, 5s. 3d.
25 De Beer's, 4s.	100 Nacupal, 5s. 6d.	30 Trevaunance.
100 Denver, 1s. 3d.	50 New Caradon, 3s.	50 Un. Mexican, £3.
60 Devala Moyer, 10s.	20 New Emma, 6s. 6d.	25 Van, 33s. 6d.
20 Devon Con., £2 5s.	20 New Kitty, 3s.	50 Victoria Gold, 4s. 3d.
75 Devon Friendship 9d.	50 Nouveau Monde, 3s. 6	20 Violeta, 29s.
20 Dolomath, £27.	60 New West Caradon,	200 Wentworth, fully pd.
80 Drakeville, 4s.	60 Nundydroog, £1 17s. 6	10s.
60 East Blue Hills, 34s.	100 Nine Reefs, 16s.	20 West Basset, £3 2s. 6d.
80 Eberhardt, 2s. 3d.	50 Oregum, 19s.	30 West Godolphin 32s. 6
25 East Lovell, 12s.	20 Or. Pref., 20s.	20 Wh. Grenville, £17.
25 Ecton, 26s.	100 Organo, 26s.	30 Wheel Basset, £5 17s. 6
15 El Callao, £52.	50 Orita, 23s.	30 West Caradon, 3s.
20 Frontino, 12s. 6d.	30 Oscar, 5s.	20 West Polbrean, 14s.
50 Fronton, 6s.	30 Oscar Vendors, fully	30 West Kitty, £7 15s.
100 Gold Hill, 1s. 9d.	paid, 4s. 9d.	50 Wheel Coates, 2s. 3d.
50 Glenrock, 9s.	60 Par Tin, offer wanted,	20 Wheel Crebor, 27s. 6d.
10 Great Lacey, £10 1s.	20 Polbrean, £2 1s. 3d.	
	50 Potosi (New), 5s. 6d.	

\* BUSINESS at CLOSURE PRICES in all marketable TIN, COPPER, LEAD

GOLD, SILVER, and DIAMOND SHARES.

\* SHARES SOLD for the USUAL FORTNIGHTLY SETTLEMENT.

\* SHARES SOLD AT SPECIAL PRICES FOR FORWARD DELIVERY

(ONE, TWO, or THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**HOME RAILWAYS.—FORTNIGHTLY ACCOUNTS OPENED**

ON RECEIPT OF THE USUAL COVER.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**FOREIGN BONDS.—FORTNIGHTLY ACCOUNTS OPENED**

ON RECEIPT OF THE USUAL COVER.

ARGENTINE. RUSSIAN.

EGYPTIAN UNIFIED. SPANISH.

ITALIAN. TURKISH.

MEXICAN. URUGUAY.

PORTUGUESE.

\* SPECIAL BUSINESS in the above Stocks.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**BUSINESS in all AMERICAN RAILS, and SPECIAL BUSINESS**

in Central Pacific, Denver, Erie Ordinary and Second Mortgage, Louis-

ville, Milwaukee, Missouri, Kansas, and Texas, New York Central, Norfolk and

Western Pref., Northern Pacific Pref., Ohio Pref., Ontario, Oregon Gold

Mortgage.

**FORTNIGHTLY ACCOUNTS OPENED ON RECEIPT OF THE USUAL COVER.**

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**GRAND TRUNKS.—SPECIAL BUSINESS and INFORMATION.**

Fortnightly Accounts opened on receipt of the usual cover.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**MEXICAN RAILS.—BUSINESS done at CLOSE MARKET**

PRICES in First Preference, Second Preference, and Ordinary Stocks.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**BANK, OMNIBUS, TRAMWAY, GAS, WATER, and CANAL**

**SHARES.** BUSINESS in all the above, and fortnightly accounts opened.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**MISCELLANEOUS SHARES of all DESCRIPTIONS BOUGHT**

or SOLD. SPECIAL BUSINESS in:—

AQUARIUM. IRON and COAL.

HOTEL. ELECTRIC LIGHT.

And other COMMERCIAL or INDUSTRIAL SHARES.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**OPTIONS in all STOCKS and SHARES dealt in.—**

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**INDIAN GOLD SHARES.—SPECIAL**

**BUSINESS.** Mysore. Oregum.

Devala Moyer. Nine Reefs. Oregum Preference.

Glenrock. Nundydroog. Tamboracherry.

Indian Consolidated.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**SCHWAB'S GULLY DIAMOND SHARES.—**

**DE BEER'S DIAMOND SHARES.**

SPECIAL BUSINESS in the above, either for CURRENT SETTLEMENT or

for FORWARD DELIVERY (one, two, or three months), on DEPOSIT OF

TWENTY PER CENT.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**INDIAN GOLD MINES.—SHAREHOLDERS AND INVESTORS.**

IMPORTANT INFORMATION is given respecting the Gold Mines in

MYSORE AND WYNNAAD DISTRICTS in THE BRITISH AND FOREIGN

MONTHLY MINING NEWS for DECEMBER No. 553, which will be sent to

customers and others on application to

**Messrs. PETER WATSON AND CO.,**

18, AUSTIN FRIARS, LONDON, E.C.

Annual Subscription..... 5s. | Single Copy..... 6d.

N.B.—IMPORTANT INFORMATION is also given in this number respecting

LEAD, COPPER and TIN MINES, MINE SHARE MARKETS, &c.

**TO SHAREHOLDERS AND INVESTORS IN MINES.**

**BRITISH, FOREIGN, AND COLONIAL MINES.**

IMPORTANT INFORMATION TO SHAREHOLDERS AS TO

PURCHASE or SALE of MINES SHARES at PRESENT PRICES.

**Messrs. PETER WATSON AND CO.**

STOCK AND SHARE DEALERS,

18, AUSTIN FRIARS

OLD BROAD STREET, LONDON, E.C.

OVER FORTY YEARS' EXPERIENCE in connection with BRITISH and

FOREIGN MINE MANAGEMENT, and the STOCK and SHARE MARKETS.

BUSINESS in all MARKETABLE MINE SHARES and STOCK EXCHANGE

SECURITIES.

SELECTED LIST OF MINE SHARES for INVESTMENT OR SPECULA-

TION OF TWELVE MINES sent on APPLICATION, with a DAILY PRICE

LIST of any Shares required by Customers and intending Purchasers.

**BANKERS:** The ALLIANCE BANK (Limited).

Every information may be obtained on personal application or by Letter as to

Purchases and Sales of Mine and other Shares.

**MR. JAMES STOCKER, STOCKBROKER,**

**Has Special Business in the following for cash or settlement by arrangement**

free of commission:—

90 Albion, New. 30 Great Lacey. 50 Pesterena.

120 Alameda, New. 60 Home Mines. 150 Potosi (New).

400 Alameda. 60 Hoover Hill. 60 Prince Royal.

200 Balkis. 100 Indian Consolidated. 50 Prince of Wales.

40 Bratsberg. 75 Javali. 30 Richmond.

150 Chontales. 45 Killifreth. 100 Ruby.

100 Colombian. 150 Kohinoor B. 30 Rio Tinto.

100 Callao Bis. 50 La Plata. 100 Russell Gold.

45 Carn Camborne. 30 Leadhills. 35 Silver Queen.

100 Chile Gold. 300 Lisbon-Berlyn. 30 Schwab's Gully.

100 Chontales. 40 La Trinidad. 60 Spitzkop.

50 Colombian. 40 Montana. 100 Tocopilla.

25 Colorado. 50 Mysore Gold. 20 Tolima A.

25 Devon Consols. 140 Mysore Reefs. 30 Trevaunance.

70 Devala. 400 Nouveau Monde. 100 Tamboracherry.

100 Denver. 60 Nundydroog. 25 United Mexican.

3 El Callao. 100 Nine Reefs. 100 Violeta.

150 Eberhardt. 80 Orita. 40 Van.

100 Ecton. 50 Organo. 100 Victoria Gold.

55 Frontino. 50 Oscar Gold. 30 West Godolphin.

180 Glenrock. 150 Oregum. 30 West Kitty.

40 Panulillo. 60 W. Metal & Flow.

**ESTABLISHED 1851.**

**BANKERS:** LONDON AND WESTMINSTER.

**JOHN RISLEY, STOCK AND SHARE BROKER,**

**AND MINING SHARE DEALER,**

**38, CORNHILL, LONDON, E.C.**

**ALL BUSINESS DONE AT NET PRICES FOR CASH, ACCOUNT, OR**

**FORWARD DELIVERY.**

**SELLERS and BUYERS should send FIRM ORDERS at once.**

**CLOSING PRICES, FRIDAY, 18th DECEMBER, 4 P.M.**

**BRITISH MINES.**

**Buyers. Sellers. Buyers. Sellers.**

Devon Consols £2 0 0 ... £2 5 0 Prince Royal ... £0 4 0 ... £0 5 0

Ecton 1 0 0 ... 1 5 0 Roman Gravel 4 15 0 ... 5 5 0

East Blue Hills 1 10 0 ... 1 12 6 Shepherds United 0 2 0 ... 0 3 0

Home M. Trust 0 13 0 ... 0 15 0 Van 1 12 0 ... 1 14 0

Killifreth 0 9 0 ... 0 11 0 West Kitty 7 7 6 ... 7 12 6

Leadhills 2 10 0 ... 2 15 0 West Godolphin 1 7 6 ... 1 12 6

New Kitty 1 7 6 ... 1 12 6 Wheel Crebor 1 5 0 ... 1 7 6

Prince of Wales 0 6 6 ... 0 7 6 Wheel Metal 0 13 0 ... 0 15 0

**INDIAN GOLD MINES.—Messrs. BEAZLEY AND CO. have**

large transactions in these shares, and are prepared to BUY and SELL at

closest current price on receipt of wire or letter.

Telegrams should be addressed—BEAZLEY & CO., Coleman-street, London.

**FOREIGN MINES.**

**Buyers. Sellers. Buyers. Sellers.**

Alameda £0 4 0 ... £0 5 0 Nundydroog ... £1 12 6 ... £1 17 6

Bratsberg 0 10 0 ... 0 12 6 Nouv. Monde 0 2 9 ... 0 3 3

Balkis 0 4 0 ... 0 4 9 New Potosi 0 4 6 ... 0 5 6

Callao Bis 0 8 0 ... 0 10 0 New Chile 0 6 0 ... 0 7 0

California 0 2 8 ... 0 3 9 New Albion 1 0 0 ... 1 5 0



# TANGYES LIMITED

CORNWALL WORKS, BIRMINGHAM.

DEPOTS AT

LONDON . . . 35, QUEEN VICTORIA STREET, E.C.	NEWCASTLE . . . ST. NICHOLAS BUILDINGS.
MANCHESTER . . . DEANS GATE.	GLASGOW . . . ARGYLE STREET.
SYDNEY . . . BATHURST STREET.	MELBOURNE . . . COLLINS STREET WEST.
PARIS . . . . . PLACE DE LA REPUBLIQUE.	

## IMPROVED WESTON'S DIFFERENTIAL PULLEY BLOCKS

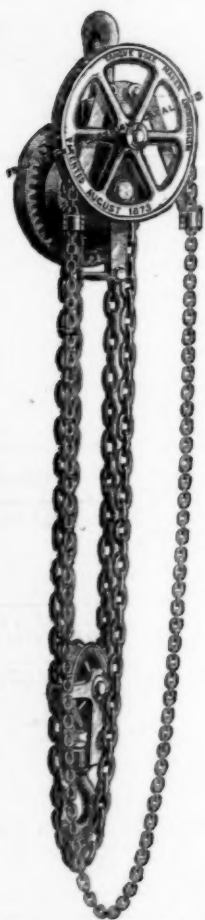
WITH

TANGYES' PATENT SWIVELLING RADIAL CHAIN GUIDES.

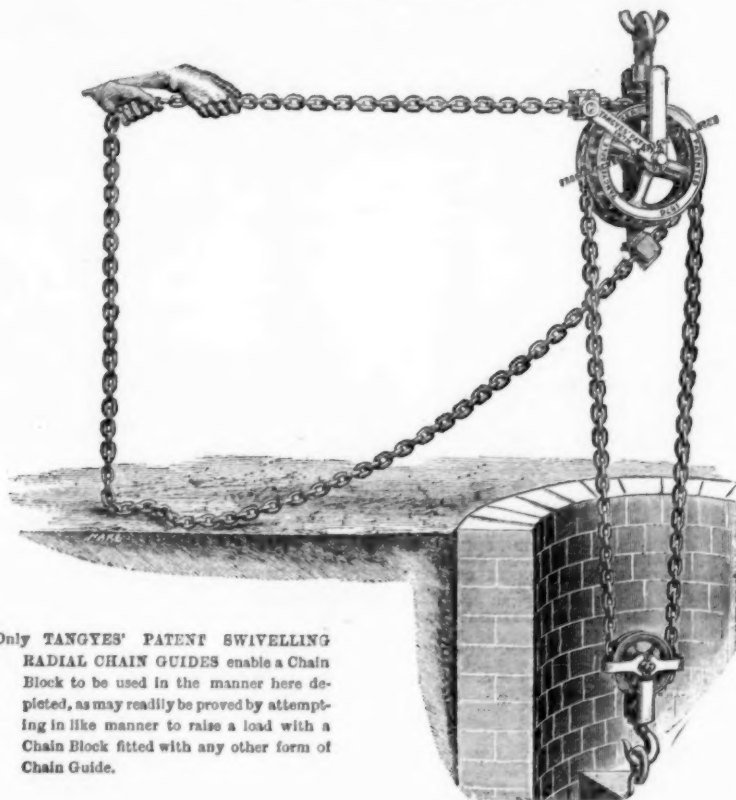
TANGYES' PATENT SWIVELLING RADIAL CHAIN GUIDES were devised to prevent the troublesome locking of chains so commonly experienced with the original Weston and other Chain Blocks; and TO ENABLE THE BLOCKS TO BE USED IN POSITIONS (see illustration) WHERE THE LOOSE LOOP OF CHAIN MUST BE PULLED AT A VERY CONSIDERABLE ANGLE WITH THE LOOP CARRYING THE LOAD.

The essential feature is that the guides swivel so as to adapt themselves TO ANY ANGLE at which the chain is pulled and allow the chain to pass freely.

N.B.—Be careful to state on Order "with TANGYES' PATENT SWIVELLING RADIAL CHAIN GUIDES."

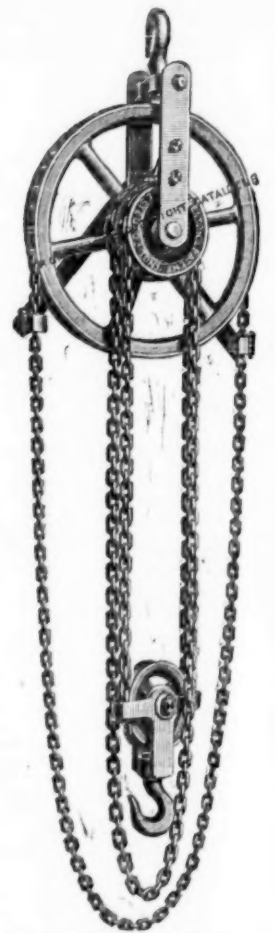


WITH TANGYES GEAR



Only TANGYES' PATENT SWIVELLING RADIAL CHAIN GUIDES enable a Chain Block to be used in the manner here depicted, as may readily be proved by attempting in like manner to raise a load with a Chain Block fitted with any other form of Chain Guide.

(New Design, Copyright, showing action of Tangyes' Patent Swivelling Radial Chain Guides.)



WITH SPOCKET WHEEL.

WESTON'S BLOCKS WITH TANGYES' GEAR.

Tested to .....	2	3	4	5	6	8	10	12
Blocks per set ... £	2 13	3 5	4 0	5 10	7 0	9 0	12 0	18
Lift Chain ... per ft.	9d.	10d.	11d.	1/-	1/3	1/6	1/9	3/
Hand Chain... per ft.	6d.	6d.	6d.	7d.	7d.	7d.	8d.	8d.

WESTON'S BLOCKS.

Tested to .....	1/2	1	1 1/2	2	3	4
Blocks per set .....	8/	12/6	14/6	17/6	25/	32/
Bright Chain pr. ft.	5d.	5d.	6d.	7d.	8d.	9d.

WESTON'S BLOCKS WITH SPOCKET WHEEL.

Tested to .....	1 1/2	2	3	4
Blocks per set.....£	1 13	2 5	3 0	3 15
Lift Chain ... per ft.	8d.	9d.	10d.	11d.
Hand Chain... per ft.	6d.	7d.	8d.	8d.

## WESTON'S DIFFERENTIAL PULLEY BLOCKS WITHOUT GUIDES.

N.B.—BE PARTICULAR TO STATE ON ORDER "WITHOUT GUIDES."

Tested to .....	1/2	1	1 1/2	2	3	4
Blocks.....per set	6/	8/6	11/6	13/6	20/	27/6
Bright Chain..... per ft.	5d.	5d.	6d.	7d.	8d.	9d.

ALL SIZES OF BLOCKS ALWAYS IN STOCK.

The particular attention of purchasers is desired to the PRICES on this List; some Vendors of Blocks selling at much higher gross price than these. In all cases it is necessary to COMPARE LIST PRICES AS WELL AS DISCOUNTS.

Copyright—Entered at Stationers' Hall.

# R. HUDSON'S PATENT STEEL TRUCKS, POINTS AND CROSSINGS, PORTABLE RAILWAY, STEEL BUCKETS, &C., &C. GILDERSOME FOUNDRY, NEAR LEEDS.

Patented in Europe, America, Australia, India, and British South Africa, 1875, 1877, 1878, 1881, and 1883.

N.B.—The American, Indian, Australian, and Spanish Patents on Sale.

Upwards of 25,000 of these Trucks and Wagons have been supplied to the South African Diamond Mines; American, Spanish, Indian, and Welsh Gold, Silver, Copper, and Lead Mines; Indian and Brazilian Railways, and to Railway Contractors, Chemical Works, Brick Works, and Coal and Mineral Shippers, &c., &c., and can be made to lift off the underwork, to let down into the hold of a vessel, and easily replaced. They are also largely used in the Coal and other Mines in this country, and are the **LIGHTEST, STRONGEST, and most CAPACIOUS** made, infinitely stronger and lighter than wooden ones, and are all fitted with R. H.'s Patent "Rim" round top of wagons, requiring no rivets, and giving immense strength and rigidity. End and body plates are also joined on R. M.'s patent method, dispensing with angle-irons or corner plates.

Registered  
Telegraphic Address:  
"GILDERSOME,  
LEEDS."  
A. B. C. Code used.

(Near Gildersome Station, G.N.R.,  
Main Line, Bradford to Wakefield  
and London, via Laisterdyke and  
Ardley Junctions.)

TELEPHONE No. 14, LEEDS  
EXCHANGES.

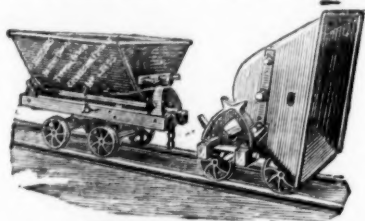
17.—SELF-CONTAINED TURNTABLE,  
Requiring no Foundations.



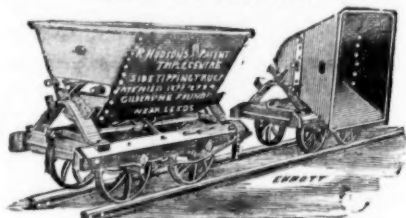
1.—PATENT STEEL END TIP  
WAGONS.



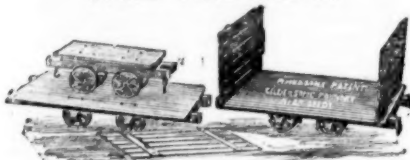
2. PATENT UNIVERSAL TRIPLE-CENTRE  
STEEL TIPPING TRUCK,  
Will tip either SIDE or either END of rails.



3.—PATENT TRIPLE-CENTRE STEEL  
SIDE TIP WAGONS.



4.—PATENT STEEL PLATFORM OR  
SUGAR CANE WAGON.



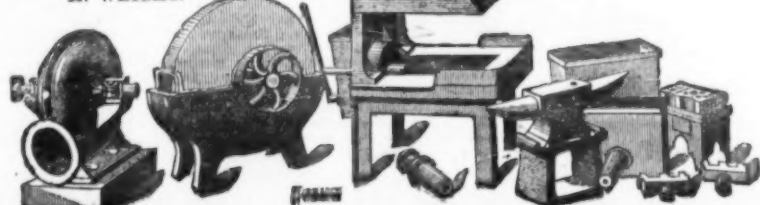
5.—PATENT STEEL CASK.

As supplied to H.M. War Office for the late war in Egypt.  
DOUBLE THE STRENGTH of ordinary Casks without any  
INCREASE in weight.  
(Made from 10 gals. capacity upwards to any desired size.)



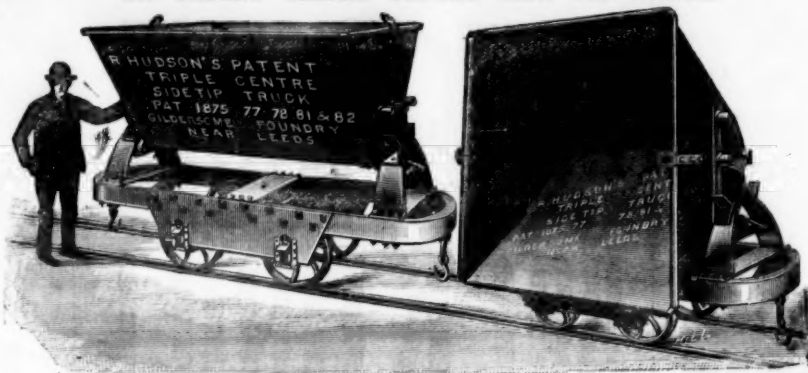
6.—ROBERT HUDSON'S  
PATENT IMPROVED IRON  
SMITH'S HEARTH,  
NO BRICKWORK REQUIRED.

A Special quality made almost entirely  
in STEEL, effecting a GREAT SAVING  
IN WEIGHT.



Large numbers in use by all the principal Engineers in this  
country and abroad.

23.—PATENT TRIPLE CENTRE SIDE TIP TRUCK.



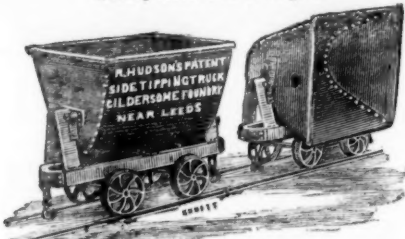
One man can tip any weight with ease.

7.—PATENT STEEL MINING WAGONS.

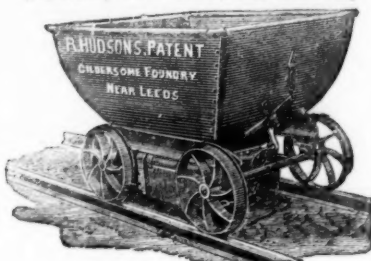


8.—PATENT DOUBLE-CENTRE STEEL  
SIDE TIP WAGONS.

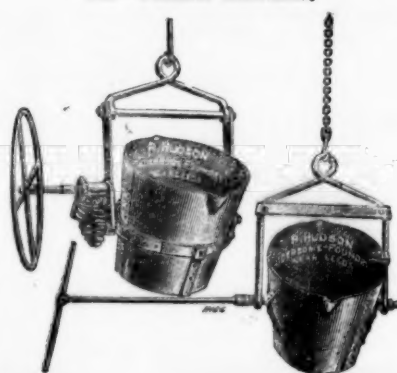
Will tip either side of Wagons.



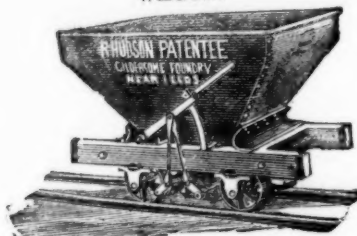
12.—PATENT STEEL HOPPER  
WAGON, with BOTTOM DOORS.



28.—CRANE LADLES.



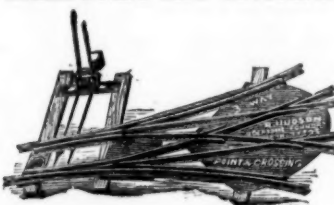
13.—PATENT STEEL HOPPER  
WAGON.



10.—LEFT-HAND STEEL POINT  
AND CROSSING.



11.—RIGHT AND LEFT-HAND  
STEEL POINT AND CROSSING.



14.—SELF-RIGHTING STEEL  
TIP BUCKET.

The "Catch" can also be made self-  
acting if desired.



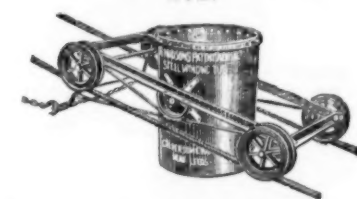
15.—R. HUDSON'S  
Patent Steel Cage  
and "Fallers," &c.,  
complete.



24.—R. H.'s PATENT BALANCED END TIP.



18.—"AERIAL" STEEL WINDING  
TUB.



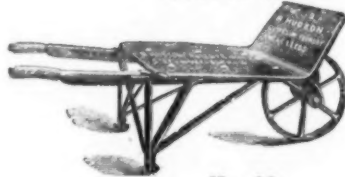
Largely employed in the South African  
Diamond Fields.

16.—PATENT STEEL WHEELBARROWS.  
Made to any Size.  
Lightest and Strongest in the Market.

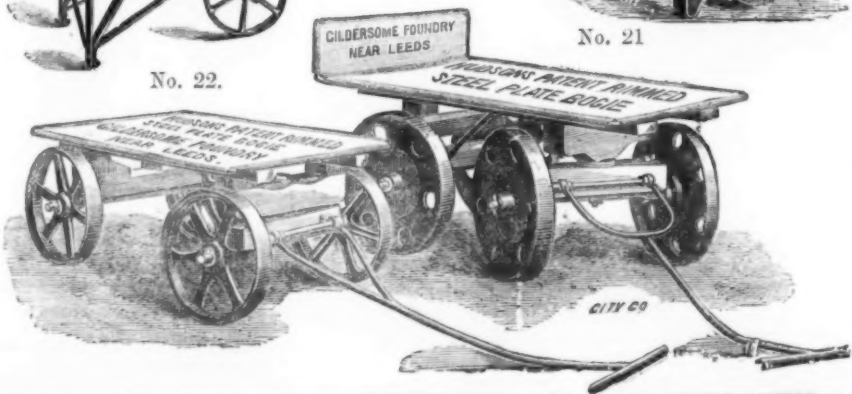


A great success.

25.—PIG-IRON BARROW  
R. H.'s Patent



No. 22.



19.—PATENT STEEL CHARGING  
BARROW.

Double the strength and lighter than ordinary  
Barrows.



No. 21

ALL KINDS OF BOLTS, NUTS, AND RIVETS MADE TO ORDER ON THE PREMISES.

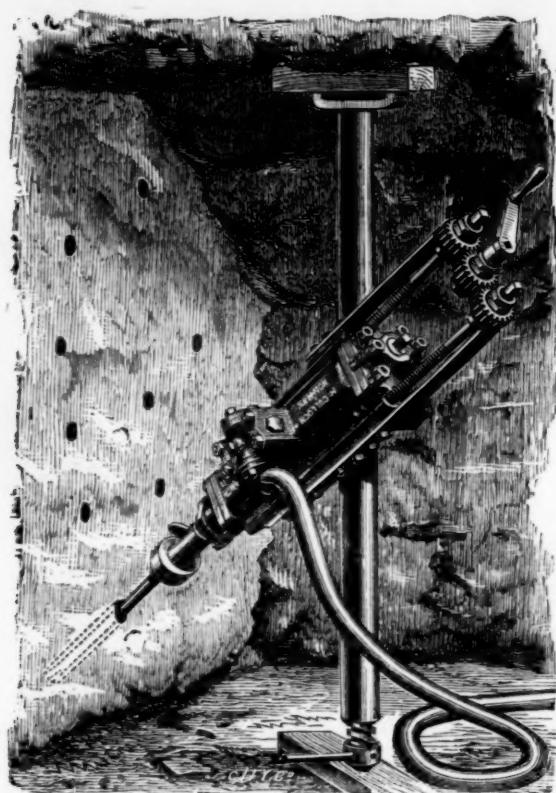


Pumping Engines  
for  
Mines, Water Works,  
Sewage Works,  
and  
General Purposes.  
CATALOGUES ON

# PUMPING & MINING MACHINERY. HATHORN, DAVEY, & CO., LEEDS.

Hydraulic Pumps,  
Winding Engines,  
Air Compressors,  
Man Engines,  
Capstans,  
&c., &c.  
APPLICATION.

FIRST SILVER MEDAL, ROYAL CORNWALL POLYTECHNIC  
—Highest Award for Effectiveness in Boring, and Economy in  
the Consumption of Air.  
JUBILEE EXHIBITION, 1882.  
THE PATENT  
"CORNISH" ROCK DRILL.



FIRST SILVER MEDAL AWARDED AT BORING COMPETITION, DOLCOATH MINE, 1881.

The "CORNISH" ROCK DRILL and "CORNISH" COMPRESSOR

Are now largely in use, and in every case are giving entire satisfaction.

For Testimonials, Illustrated Catalogues and prices, apply to—

**HOLMAN BROTHERS,**  
CAMBORNE FOUNDRY,  
MAKERS OF

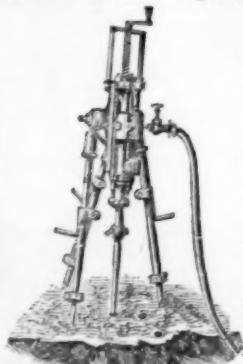
MICHELL & TREGONING'S PATENT PULVERISER, and HOLMAN'S IMPROVED STEAM or AIR PUMPING and WINDING ENGINE for Underground Quarries or Shallow Mining. Indispensable for Shaft Sinking with Rock Drills. Also makers of all kinds of MINING MACHINERY at

THE CAMBORNE FOUNDRY AND ENGINE WORKS, CAMBORNE, CORNWALL.

THE PATENT  
"ECLIPSE" ROCK-DRILL  
AND  
"RELIANCE" AIR-COMPRESSOR.

First Silver Medal awarded at Boring Competition, East Pool Mine, Sept. 1883.

SILVER MEDAL—PARIS, 1878—  
HIGHEST AWARD



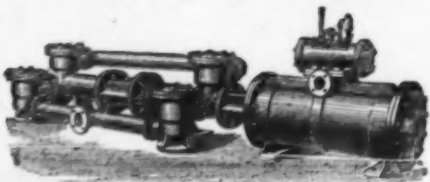
Are NOW SUPPLIED to the  
ENGLISH, FOREIGN, and  
COLONIAL GOVERN-  
MENTS, and are also IN USE  
in a number of the largest  
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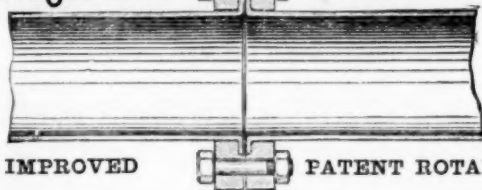


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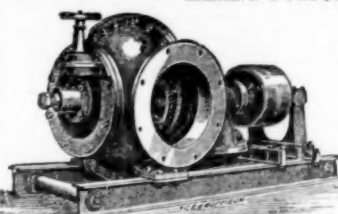
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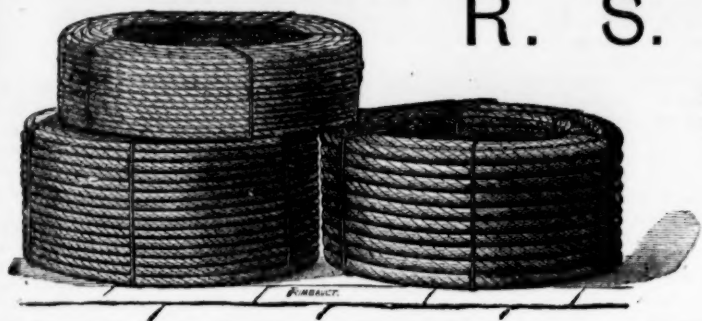
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Reserve Fund, £122,500.  
The Court of Directors of the Colonial Bank hereby give notice that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of proprietors will be HELD at the Bank House, 13, Bishopsgate-street Within, E.C., on THURSDAY, the 7th of January, 1886, at Two o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of five directors and one auditor in the room of the following gentlemen, who go out by rotation, viz.:—Rodolph A. Hankey, Esq., Joseph Hoare, Esq., Lewis Hill Bliss, Esq., Spencer H. Curtis, Esq., and William Rennie, Esq., directors, and Colonel Francis G. Hibbert as auditor, all of whom, being eligible, offer themselves for re-election.

The Transfer Books of the Corporation will be closed on the 21st December, 1885, and reopened on the 7th January, 1886.  
By order of the Court of Directors, JAMES CLARK, Secretary.  
13, Bishopsgate-street Within, E.C., London, 11th December, 1885.

The LIST OF APPLICATIONS for TOWN and COUNTRY will CLOSE on THURSDAY, 24th DECEMBER.

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This company is formed for the purpose of purchasing and working a property known as the Centennial Gold Mine, situated in Placer County, California, about 11 miles from Auburn, (a station on the Central Pacific Railway), and 145 miles north east from San Francisco. The claim covers a surface of 1500 ft. in length by 600 ft. wide, and the original workings consisted of a shaft 115 ft. deep, which is in fine pay ore from the top to the bottom, with a tunnel 260 ft. in on the vein. A second tunnel in a more suitable position for delivering the ore to the proposed mill has since been driven, and the result of this development gives additional evidence of the great value of the property.

The following extracts are from the letters of Mr. Franklin E. Morse, who has had great experience in gold mining, and is now managing the property. In the manager's report upon the property, dated the 27th of August, 1885, he says: "About the 15th July the workmen encountered very hard rock, the work was slow and I delayed writing simply because I had hoped from day to day to inform you that the ore vein had been cut. We did not do this until August 22nd. From this new cross-cut tunnel, which is 300 ft. deep, the ore will be delivered into the proposed mill. On the 25th the workmen had drifted north on the vein about 6 ft. and I found the ore as they went north continually widening and they had taken out in the 6 ft. drift, fully 5 tons of splendid high grade rock in much of which gold is visible to the eye." The manager further says: "I had an assay made some ten days ago, from an average sample that gave \$38 per ton; all my own prospects have been up to an average of \$30 per ton." In a previous letter he states that "the vein is a true fissure vein in the most perfect formation that could be found on the Pacific Coast; the pay streak solid from 2 to 3 ft. wide, and a perfect fine milling ore, which can be mined and milled at a cost not exceeding 15s. per ton, as simple water power to run the mill can be obtained within a short distance."

If these estimates be correct they warrant the following calculation, which may give some approximate idea of the value of the mine:—To commence with it is intended to erect a 10 stamp mill as quickly as possible, which should crush at least 15 tons per day—  
15 tons at \$30 a ton = £450  
Less cost of production at 15s. per ton on 15 tons, 12  
£73  
200 days

Net profit per annum, £23,400

Assuming that only 80 per cent. of the gold be extracted it will still leave a very handsome return upon the capital of the company.

Assays made at the Star Metallurgical Works, San Francisco, 7th Sept., 1885.		Ounces		Value		Total	
No.	Mark.	Gold per ton.	Silver p. ton.	Gold p. ton.	Silver p. ton.	Value	Value
8605	No. 7	2 1/2-100	60	62 50	78	63 58	83 58
8601	No. 10	2 1/2-100	60	62 50	78	63 58	83 58
8607	No. 11	2 1/2-100	60	62 50	78	63 58	83 58
8608	No. 12	3 1/2-100	72	72 81	94	73 78	94 78

On the 10th of September, 1885, the manager writes: "There has been taken out and now on the dump, some 6 to 12 tons, that in my opinion, would mill about up to these assays. This ore comes from the deepest part of the vein yet opened, and I must say that in richness it is far above my expectations. Judging from all indications, this vein will be one of great strength and richness. I have tested this ore by pan from all accessible parts of the vein, and sampled it in the most careful manner for assay; in every case it has exceeded by far my anticipations."

"This is a mine that will gain in value as depth is attained, and the vein will enlarge and become more regular, and so far depth has given greater richness." These assays would indicate a result nearly double that shown by the foregoing calculations, and it is not assumed that such extraordinary results will be realised. At the same time, it may be borne in mind that the "Church Union Mine," in the same county, having a vein similar to this, but not as favourable at the start, is said to have paid nearly £275,000 in less than five years, and the "Keystone Mine," in an adjoining county, is said to have paid dividends for 17 years, and at no time less than \$5000 per month. It should be especially noted that while this mine has been developed so far as to prove the value and extent of the ore, its mineral wealth has not been exhausted by previous working, but remains intact. That there is no immediate necessity for extensive outlay for pumping and hoisting machinery, as the mine can be worked for the present entirely by adit levels, and that a working capital of £20,000 is deemed more than sufficient for the requirements of the mine.

The vendor, who is the promoter of the company, has fixed the price of the property at £55,000—payable as to £5000 in cash, £15,000 in fully paid-up shares, and the balance in shares or cash at the option of the directors.

No promotion money will be paid, and the preliminary expenses will be strictly confined to the actual cash outlay for advertising, printing, registration, &c.

The Articles of Association provide that the directors shall receive no remuneration for their services until the shareholders have received a dividend of 10 per cent.

The only contracts entered into are one dated the 9th of January, 1885, and made between George Maither of the one part, and John Walker of the other part, and one dated the 3rd day of December, 1885, and made between John Walker of the one part, and Edward Merricks as trustee for and on behalf of the company, of the other part. These contracts, and also the various letters from the manager, can be seen at the temporary offices of the company.

It is intended to make application for an official quotation on the London Stock Exchange.

Applications for shares should be made on the form enclosed herewith, accompanied by the amount of deposit for the number of shares applied for, and if non-payment be made to an applicant the amount so received will be returned without deduction.

Prospectuses and Forms of Application may be obtained at the temporary offices of the company, 80, Bishopsgate street Within, London, E.C.

## Original Correspondence.

### GOLD MINING IN BRAZIL.

SIR,—It is by no means such an easy matter to ascertain the actual quantity of gold which has been sent to market from Brazil as "H. B." suggests. In the early part of last year a celebrated Scotch geologist went to Rio—furnished with the necessary credentials from this country—for the purpose of finding out the quantity of gold found in Brazil. He discovered that when Bonaparte declared war against Portugal, the Brazilians fearing an invasion of the country either destroyed or removed most of the important documents relating to the production of gold, &c., which were deposited at Rio. The only way now to arrive at anything like an approximate yield of the Brazilian gold fields is by going into the gold region and visiting the different camarcas and examining the local records. Kilogrammes are never mentioned in any of the records I have seen, but only arrobas (32 lbs.) and pounds. The quantities given by Loetbeer, Dietzsch, Hart, Del Mar, and others who only visited a portion of the gold region, varies from 100,000,000. to 180,000,000. See *Mining Journal* 13th May, 1882. I obtained my estimates from documents which were formerly the property of the Baron of Cocoes, which came into my possession in 1872. I make no reference to my own researches which for over three years were as diligently made as any of the above. The most reliable authority on the production of gold in Brazil is John Mawe, who was the first Englishman who was allowed to enter the gold region. He says in Chapter XVI., page 381, that even as late as "1809 the royal fifth amounted to not less than 150 arrobas." This would show a total production of 1,200,000. per annum at a time when the whole of the gold fields had almost collapsed. What has been sent to market hundreds of years ago, cannot be of so much importance to the public as to know what are the present capabilities of the gold region; I hope therefore to supply the *Mining Journal* with a paper on this subject at an early date.

I have a great objection to replying to any letters written by gentlemen who hide themselves behind a *nom de plume*. It reminds me so much of those wretched Boers who on the tops of almost inaccessible mountain ridges used to take pot-shots at us from behind rocks. Although there shots fell in disagreeable proximity to us, we never had anything but a puff of smoke to shoot at in return. In future I shall not reply to any letters unless signed by the writer in his own name.  
THOMAS COLLINGWOOD KITTO.  
Lutworth House, Gunnersbury, December 14.

### ORGANOS MANAGEMENT.

SIR,—There are necessarily many country shareholders in London mining companies who, by the circumstances of their position, are "out of touch" with their directors and brother shareholders, and save from "official" communication can learn nothing of the progress or inner working of the companies in which they may be interested. Such shareholders naturally look to the *Mining Journal* for information as to the conduct and management progress or otherwise, of the mines with which they are connected. Information which reaches the *Journal* from countless unofficial rills and channels, and after assay is found to contain most valuable "buttons" of intelligence, which the country shareholder stores for service at the general meeting. Sometimes, however, a paragraph appears which is too enigmatical to be understood save by the inner circle of shareholders in London, who possess some key which the provincial has not. Contented usually to support the board in all companies in which I may be interested, I must confess that I have been rendered uneasy by the few and fragmentary references to the Organos management which have from time to time appeared in the *Mining Journal*, though the mine itself has not been badly spoken of. The impression given is that the mine is good, but the management bad. Now, cannot you enlighten us a little, and give us for our guidance a fair and judicial criticism of the position of affairs, that we shareholders may be able to form some reasonable opinion as to how we should act for the best interests of our property? You would confer a great favour on many provincials if you would do so.

A COUNTRY SHAREHOLDER.

### CALLAO BIS.

SIR,—This company, after getting rid of a capital of 180,000, has recently been reconstructed, with a capital of 200,000, in 17 shares, with the usual 15s. credited as paid thereon, leaving the directors with 40,000. in hand to continue their researches after the Callao lode. Mr. W. Bell-Davies was sent out to report upon the mine on the 17th March. During his stay he made a provisional arrangement with the El Callao manager to drive upon the Panama lode up to the boundary of Callao Bis, giving as his opinion that it would "take nine months to reach Callao Bis boundary, in all probability six, or even less, would suffice to show with what positive certainty where the lode was to be met with." Mr. Davies was at the mines in April, when the Panama level was being driven towards Callao Bis, eight months ago. What are the shareholders to gather from the silence of the directors, that the El Callao lode is a myth, or is a herring being drawn across the scent by the El Callao people? That there is a screw loose somewhere must be apparent to most people who have watched the Callao Bis Company from the commencement. *En passant*, why are not the reports from the manager sent to the *Mining Journal* instead of to a financial journal?

PANGLOSS.

### SOLOMON'S GOLD MINES—WHERE WERE THEY?

SIR,—As this enquiry has been indirectly started by Mr. Kitto and taken up by your correspondent "S. D." it may interest your readers to read Dr. Robertson's opinion. In his "Disquisition on Ancient India," written nearly a century ago, he writes thus:—"In what region of the earth we should search for these famous ports (Tarshish and Ophir) which furnished the navy of Solomon with the various commodities enumerated by the sacred historian is an enquiry that has long exercised the industry of learned men. They were early supposed to be situated in some part of India, and the Jews were held to be one of the nations which traded with that country. But the opinion more generally adopted is that Solomon's fleets after passing the Straits of Babelmandeb held their course along the south-west coast of Africa as far as the Kingdom of Sofala, a country celebrated for its rich mines of gold and silver (from which it has been denominated the golden Sofala by oriental writers), and abounding in all the other articles which composed the cargoes of the Jewish ships. This opinion, which the accurate researches of M. D'Anville rendered highly probable, seems now to be established with the utmost certainty by a late learned traveller (Bruce; see his "Travels," book 2, chap. 4), who by his knowledge of the monsoons in the Arabian Gulf, and his attention to the ancient mode of navigation, both in that sea and along the African coast, has not only

accounted for the extraordinary length of time which the fleets of Solomon took in going and returning, but has shown from circumstances mentioned concerning the voyage, that it was not made to any place in India."—*Somerton, Norfolk.*  
JOSEPH BUDD.

SIR,—In view of what has been written respecting the supposed identification of the Indian gold fields with the celebrated Ophir of Solomon's day, allow me to add one other suggestion in support of this idea, and which appears to me a strong proof in its favour: In the archives of Israel we find it thus written:—1 Kings, x. 22. "For the king had at sea a navy of Tarshish with the navy of Hiram; once in three years came the navy of Tarshish, bringing gold and silver ivory, and apes and peacocks." It is perfectly true that gold, silver, ivory, and apes, could have been imported from Africa, or even other countries, but the peacock was indigenous to India, and this is very strong evidence that India was the country to which these vessels of Tarshish sailed, completing the voyage in three years; this may seem a long time in these days of steam and electricity, but the ships were small, and probably coasted all the way by the southern shores of Arabia, Beloochistan, to Bombay, and further south, even to the Mysore regions. These ships were not built at Tyre, King Hiram's headquarters; they were constructed at Egore Gaber at the head of the Eastern arm of the Red Sea—Solomon's shipyard. The record states that the vessels were Tarshish ships, with Hiram's navy—an island power, a merchant power, a naval power. She traded in the fairs of Tyre, the great metropolis of commerce then, with silver, iron, tin, and lead, Ezekl. xxvii. 12. Now there was but one source known at that time from which tin was produced, the Cassiterides (mentioned by Herodotus), or the tin islands, and known to the Phenicians as Baratanee, or the land of metals, now softened into Britannia, or Britain; and the record goes on to state how important a part this Tarshish power is to play in the latter days. Now is it not a very striking coincidence that Victoria Regina by the grace of God is to-day the Queen of Great Britain and Empress of India, thus embracing in one union the Tarshish power of the East and West. Britain to-day is opening up the wealth of India, and by her mechanical skill touching the golden El Dorado left by these ancient miners, but great as these results may be, still greater honours await this Tarshish power, that has played and is yet destined to play so conspicuous a part in the world's history, their destined to carry the sons and daughters of Israel to the homes of their fathers, at a not far distant date—Isaiah lx. 9 to 14.

F. H.

### MYSTORE GOLD MINING COMPANY.

SIR,—The British public is beginning to wake up to the fact that there is gold in India, and that in paying quantities. Surely that is a fair deduction from the fact that the Mysore Company at a comparatively early stage of its development got 1096 ozs. of gold from crushing during November 362 tons of quartz. One thing that is peculiarly satisfactory about this company is that the crushing results obtained agree very closely with Capt. Plummer's assays. I am not a speculator, but have something invested in several of these Indian properties from the Mysore Company to the Wynaad Perseverance, and have not the slightest intention of parting with a single share. The Wynaad is at a higher level than the Mysore district, and possibly the companies in the former may have to go deeper than has been found necessary in Mysore, but everything seems to point to the conclusion that there is gold in paying quantities both in the Mysore and the Wynaad districts.

December 16.

COUNTRY SHAREHOLDER.

### DISPARITY.

SIR,—A remarkable instance of disparity in the market value is now furnished by two equally good, highly respectable gold-mining companies—the Mysore, and the Santa Barbara. I am not a shareholder in either, but the difference in price seems so great as to merit a passing notice. The last monthly yield of the latter is 1906.7, that of the former 1046.7, yet the Mysore, with returns about half the other, is selling positively at about 11 times the value of Santa Barbara, and is still rising. Santa Barbara lies in one of the richest gold regions of the world, with splendid prospects I am told, whilst Mysore district has only just been proved. I do not wish to draw an invidious comparison to the prejudice of the Mysore Company—the property may be worth all the price put upon it, and I am disposed to think it is, but why should Santa Barbara be relatively at so low a price—1-11th that of Mysore. Perhaps this disparity of value has not yet been noticed by investors.

VIGILS.

### PORT PHILLIP GOLD MINING SHARES.

SIR,—Why should Port Phillip Gold shares sell at only 3s. each, when Indian gold mining shares are dealt in at so much higher prices? If this be madness there is no method in it. The prospects of Port Phillip—an old, well-known, and well-trieved Australian mining property, which has returned high dividends and is known to possess large quantities of paying quartz in the undeveloped portions of the lower levels—are very good just now. It is going to be worked on a new and satisfactory basis, and, with an ample reserve in hand to go on with, it is marvellous that Port Phillip shares should still be obtainable at 3s. per 17 share. Why, its future is at best as promising as that of many Indian gold mines, the shares of which are selling at par, or nearly so.

A HOLDER.

### DEVALA CENTRAL GOLD MINING COMPANY (LIMITED).

SIR,—Until the above company, like so many others, exhausted its capital, most excellent work was done, and the prospects were decidedly encouraging. But without funds liquidation becomes its fate. Still there is the property, to a great extent developed. Why should an effort not be made, as in the case of the Mysore Reefs, Oregum, and others, to reconstruct the company? I feel assured that funds would be found now that public feeling is once more in favour of Indian gold mines.

ORIGINAL HOLDER.

December 17.

### THE KAPANGA GOLD MINE AND THE "BOOM" IN NEW ZEALAND MINES.

SIR,—The excellent report in your *Journal* of last Saturday on the "boom" in the New Zealand gold field, has aroused the shareholders of the Kapanga Gold Mining Company to a sense of the value of their property, and several suggestions have been made for providing capital for resuming work on the Kapanga. It was never disputed that the Kapanga was a genuine gold mine, for some 100,000 ozs. of gold have been taken out of the upper workings. But the lodes are known as pocketty, similar to the silver deposits in the Emma Hill in Utah. But when a pocket of ore is found it means a 100,000, or perhaps 250,000. As the lodes in the Kapanga were still being worked upon when explorations ceased some months ago, the property still exists as a gold mine, and a pocket of 4 ozs. quartz may be struck any time. Under these circumstances I hope the shareholders will support any good scheme for raising new capital.

J. J.



## VAN MINING COMPANY.

Sir,—It will be cheering to my co-shareholders to observe from the year's accounts just issued that, even with the low prices ruling recently for lead, during the past year a profit has been made in the old section of the mine of 710*l.*, equal to a dividend of 5 per cent. on our small capital of 15,000*l.* This sum it is wisely decided to hold in reserve. Had lead throughout the year been even at present prices, 2*l.* 10*s.* per ton more would have been realised for the 800 tons raised, and a dividend would have been earned of nearly 20 per cent. But the output has been purposely limited, and, instead of raising 2400 tons per annum as was done before the old company was remodelled, only 800 tons were raised, or, as the report says, "a quantity just sufficient to keep the mine in a good position with the buyers of ore."

If the low limit of 200 tons per month were now sold, with lead at the present figure (and it is likely soon to go higher) 60 per cent. on our modest capital is ensured. This, too, is altogether independent of the splendid discoveries laid open in the new or western part of the mine, and we have still 2500*l.* in the bank to apply to those discoveries. Our machinery is of the most improved type, and in capital order, and is in itself worth about 40,000*l.*, and the farm stock is also in good condition. When the present run on foreign mines subsides Van will be one of the first home mines to receive attention. J. C.

## PRACTICAL MINING, INSPECTORS OF MINES, &amp;c.

We last week briefly noticed the inaugural address of Mr. A. CHAMBERS, as President of the Midland Institute of Mining Engineers, but its importance as a review of practical mining, its present condition and probable future, and the fact that the gentleman alluded to is one of the largest colliery-owners in the country, and the manager of the firm or company his name is associated with, induces us to give the paper itself in detail. The value of it will be fully recognised by those in any way interested in coal mines. After noticing the various Acts of Parliament passed for regulating the employment of persons working in mines, and the improvement which has taken place during the last 30 or 40 years, Mr. CHAMBERS proceeded to notice some of the recent appointments of Inspectors of Mines. He said—We do not object to more Inspectors being appointed, but we do most seriously contend that the appointment of a lower class of men in education and attainments than the average of the present colliery managers is a grave mistake, and may lead to serious inconveniences, if not injustice in the future. If such persons are to be appointed at all it would be much better that they should be appointed as sub-Inspectors, and their duties clearly defined by an understanding between the coalowners and managers on the one hand, and the Home Office on the other. With regard to some of the so-called practical men recently appointed as Inspectors, we will remind those who have advocated these appointments that there is now in every mine in the country a daily examination by overmen and deputies, who are appointed by the manager, and chosen from the very class whom they desire to be appointed Inspectors, and these men know on the thoroughness of their inspection that their own lives, as well as those of all the men committed to their charge, depends. This is, surely, sufficient guarantee that their work will be done thoroughly and efficiently. The General Rule allowing inspection by workmen is almost a dead letter, and results from the fault of the men themselves, who are satisfied that everything is done by the management calculated to secure the safety of the men employed. The certificated manager was a new officer created by the Act of 1872, and I see it is now sought to be held that he ought to reside in close proximity to the colliery, and be in personal attendance day by day, and every day. If this contention succeeds a further responsibility is put upon certificated managers and can only result in putting an inferior class of men in this position. There are many mining engineers who are content to hold the certificate at a colliery as long as "control and daily supervision" in the common-sense way in which they are interpreted in this district, but if the new interpretation obtains many of us will be compelled to make other appointments from men of less experience, and a lower position. Let the advocates of this new interpretation consider whether this is likely to promote the main object of the Legislature in passing this Act. It may be said that we should not get rid of our liability under the Act. This may be true to some extent; but certainly we shall remove it one step from us, and the person on whom the responsibility rests under the Act is without doubt the certificated manager. Some of the clauses of the Act are loosely worded, and the responsibility of the interpretation of these clauses rests with the certificated manager. This is especially the case with respect to General Rule 8, as to the use of gunpowder, which, according to its literal interpretation, allows in a fiery mine shots to be fired in the main return air-roads, and at the bottom of the upcast shaft, when miners are in the pit; but prohibits this being done at the bottom of the downcast pit. The condition of a blue cap in clause 2, under sub-section *f*, is also unsatisfactory, as this condition may be found to exist in almost any heading or cutting side in some seams of coal, where there is an almost entire absence of gas in any other part of the pit. With the above important exceptions, the main provisions of the Act have worked exceedingly well, and have, no doubt, contributed, particularly in the matter of discipline, to the reduction of the number of accidents of a serious character, the loss of life from which has steadily been diminished for years past. In the five years from 1875 to 1879 inclusive the quantity of coal raised was 366,150,893 tons and the lives lost was 5771, or one life for each 115,431 tons raised. In the five years from 1880 to 1885 inclusive the quantity raised was 782,148,792 tons, and the lives lost 5394, or one life for each 145,003 tons raised. This number is far too large, and how to diminish it was the constant thought of every colliery-owner and manager, but it must be remembered that outbursts of gas resulting in explosions is still involved in the greatest mystery. These pent-up volumes of gas came out of the roof or floor, and every effort to tap them by boring has hitherto been unsuccessful. Careful observations as to earth tremors have not enabled us to detect with any certainty the cause of these subtle influences. Mother Earth still conceals its secret, but though hitherto baffled we are determined to prove the mystery to its source, and make unwilling, or rather willing Nature, reveal to us the occult conditions under which she clothes these engines of destruction with their hitherto unconquerable energy. With regard to falls of roofs and sides of working places, as well as miscellaneous accidents, it is well known to mining engineers, inspectors, and coroners that these are sadly too often due to the negligence, and in many cases foolhardiness of the unfortunate victims. After alluding to the good that might be expected to result were the young engineers members of the Institute to form classes in winter of the most intelligent young miners, and give them lessons on such subjects as the nature of gases, the use of safety-lamps, &c., Mr. CHAMBERS said the subject which had occupied most of the time of the Institution during the past year was to endeavour to discover the best and most reliable type of safety-lamp. Sir F. ABEL, in a recent address, gives us some credit for our experiments but his statement that the MUESLER safety-lamp will cause an explosion in a current of fire-damp 6 to 10 ft. per second, does not agree with our experiments. No doubt Sir F. ABEL is referring to lamps of the Belgian MUESLER type, without shields, but in the case of these lamps, though submitted by us to many

tests, we were not able to cause an explosion with them at a less velocity than 17 ft. per second. Several types of the MUESLER lamp, fitted with the outside shield, have resisted every effort to cause an explosion in currents up to 50 ft. per second. Again, he states that amongst the lamps which resisted very highly, for safety and efficiency, were those of M. MARSAUT, with three gauzes, and that of Mr. MORGAN, of Pontypriid. Unfortunately, in spite of the persistent efforts of our secretary, we have been unable to obtain one of Mr. MORGAN's lamps, but we have made many experiments with the MARSAUT. With two gauzes it has exploded the fire-damp mixture at a speed of 30 ft. per second, and with three gauzes at velocities of from 40 to 50 ft. per second in experiments of from 35 to 53 seconds duration, when the three gauzes became red hot, and if the experiments had been continued a few seconds longer, it must have caused an explosion. Our experiments also showed that the MARSAUT lamp ceases to be self-extinguishing at a velocity of 22 ft. per second, whereas lamps of the MUESLER type with the outside shield by MARSAUT will extinguish themselves at velocities up to 30 ft. per second. The conditions under which we mining engineers pursue our profession are continually changing, and as time rolls on are becoming more complex: 30 years ago this district had not a pit much more than 250 yards deep, and it was comparatively easy then for a colliery-owner with the aid of a bottom steward to raise coal, even the wonderful Barnsley seam with very satisfactory results. The conditions are now entirely different owing to the greater depths that have to be sunk to, so that any owner who now attempted to work on the same plan, and with the same appliances of stuff and machinery, which were successful at the shallow pits, will probably find sooner or later, that the employment of the best scientific skill and experience would have saved him a large amount of money, if not from disaster as well. Now the mining engineer must be what his name implies, and something more. He must be a geologist, a mechanical engineer, a civil engineer, an ironmonger, a horsedealer, a corn merchant, a timber merchant, a chemist, and a diplomatist, besides a number of other incidental trades and professions. I have nothing to say against Unions which workmen form amongst themselves for the protection and defence of their interests, but I think they might spend a good deal of their money more usefully than in maintaining or half maintaining them in hopeless strikes. The organisations might be carefully employed in prosecuting experiments on parallel lines to those promoted by this Institute, or in co-operating with us to produce the best and safest appliances for conducting colliery operations, an above all in doing something to promote the technical elementary education of the rising generation of miners in this country. With respect to coal-cutting machinery an immense amount of ingenuity and money has been expended with hitherto comparatively small success. No machine had been more successful in the work done than CARRETT and MARSHALL's hydraulic coal cutter. It cut most successfully in very hard tough shale which no pick would touch in the Grosmont Ironstone Mines, and at a colliery near Leeds. But the cost of conveying water, 400 lbs. to the square inch, throughout the complicated workings of a mine, as well as the cost of maintaining the machines and plant, made it impracticable—it was a mechanical success but a commercial failure. Other machines worked by compressed air have been more successful, but to a great extent the same objection hold good. Improvements, however, are being made, and some simple machines are being brought out that may help to solve the question. The application of electricity to various mining purposes is a subject full of interest and importance, and Mr. J. W. SWAN has succeeded in producing a handy electric safety-lamp with a small storage battery, weighing little more than 8 lbs., furnishing a light from two to four times as much as that given by the best form of safety-lamps, and lasting from 10 to 12 hours. The law relating to the rating of mines is imperfectly understood, and the practice of nearly every assessment committee varies from that of every other one, and it would be a great service to the coal trade if some one would undertake to deal with the subject exhaustively. With respect to the way in which coal was smashed into small in the process of screening some progress has been made by the use of moving screens, revolving and otherwise, and by the picking belt which has recently come into use. As to coke, there is no difficulty in making from 60 to 70 per cent. of it from the coals worked in the district. This, however, will not be done if the mining engineer places his coke ovens entirely at the mercy of a so-called experienced coke burner, who, as a rule, is the most stupid official about a colliery. We have been allowing the valuable by-products of the coal in the process of coking to escape into the atmosphere. Here is a field for any amount of invention and skill, as well as enterprise. If they are retained in one form only from the whole of the coke ovens in this country, the probability is that the value of that product would be so much deteriorated as to make it comparatively worthless. The prosperity of England in the past has been helped very largely by her supplying railway material and machinery and material for developing the immense mineral and other resources of other countries, which now come into competition with her products in the markets of the world, and the only way in which she can hope to maintain her position is by applying all the inventive skill of man and discoveries of science to the preserving in useful forms all the products of her raw material, the improvement of the qualities of her manufactures, and the utmost economy in all her processes, and by encouraging the utmost diligence and perseverance in all who have the command and management of them. Mr. W. JEFFCOCK, J.P., the previous President, in moving a vote of thanks to Mr. CHAMBERS for his able and practical address, and he might say he was very much struck with the remarks with respect to the appointment of working miners as Inspectors. The motion was seconded, and enthusiastically agreed to.

The Stour Valley portion of the Shrubbery Iron Works, Wolverhampton, long occupied by the firm of Thorneycroft and Co., but which have been standing for some years, have now been purchased by the Wolverhampton Corrugated Iron Company and Mr. Ernest Farnworth. The works, which have been dismantled, will be completely refurnished for the black-sheet trade. Four or six mills will be laid down, and some 300 men ultimately employed. The re-start is expected to occur in January. The news has occasioned the greatest satisfaction among the unemployed ironworkers.

Mr. Jaffray having resigned the Chairmanship of directors of Muntz's Metal Company (Limited), Birmingham, and having retired from the board, Mr. Henry Wiggins, M.P., the deputy chairman, has accepted the office of Chairman. Mr. George Heaton taking that of deputy chairman; and Mr. Arthur Keen and Mr. Abel Rollason have been elected members of the board.

**HOLLOWAY'S OINTMENT AND PILLS—SURE RELIEF.**—The weak and enervated suffer severely from nervous affections when storms or atmospheric disturbances prevail. Neuralgia, gouty pang, and rheumatic pains, very distressing to a delicate system, may be readily removed by rubbing this ointment upon the affected and adjacent parts after they have been fermented with warm water. The pills, taken occasionally in the doses prescribed by the instruction, keep the digestion in order, excite a free flow of healthy bile, and regenerate the impoverished blood with richer materials, resulting from thoroughly assimilated food, wanting which the strongest must inevitably sink into feebleness, and the delicate find it difficult to maintain existence. Holloway's ointment and pills are infallible remedies.

## Trade Reports.

## CORNWALL.

December 17.—There is certainly no present sign of a revival in mining affairs. No sooner has the disturbing influence of the election passed away than we are confronted with that of the Christmas holidays, and the tendencies, too, of some individual mines are not of a reanimating character. The inactivity of which we complain is, however, nothing more than is felt in almost every branch of business. Go where you will in Cornwall or Devon, and amongst whatever class of business men, you will hear constant complaints of the dullness of the times, and the hope that matters will shortly mend. And of course the West of England is no exception to the general rule in this particular. The fine weather that we are now enjoying points to a lightening by-and-bye of the water charges that will be acceptable; but the main elements of the recovery we look for lie outside this locality. The members of the county committee on the question of mine leases need not be afraid of going too far. That is not the danger to be guarded against. Unless they go far enough they had better leave the matter in the hands of those who will, for whatever else is uncertain about the new House of Commons we are very much mistaken if in questions of this kind it is not prepared to move with considerable rapidity. The present system cannot be patched, but must be ended.

A capital illustration of the practical value of the proposal which happily found such little favour during the late election contests—to tax foreign tin, has been supplied by the reports on the manufacture of tin-plates in this country. So far as the home consumption of these plates is concerned, it appears that it is very much at a standstill, but that for foreign countries there is a steady and growing demand. As in the case of copper, the effect of putting a duty on the raw material would be almost tantamount to the annihilation of a copper export manufacture, where it is clear that the levy of a duty on tin would be simply to offer a premium to the foreigner to do without us by forcing up the price of tin-plates, and to throw our own manufacturers back upon the supply of our own country, which being at a standstill at a low figure, would certainly not increase at a high.

It is much to be regretted—we do not say that any attempt should be made, but that any acts should be thoughtlessly done, or words spoken, which have a tendency to keep alive the unfortunate animosities engendered by the election in the Mining Division. Everywhere else matters are steadily quieting down, but here, apart from the perchance inevitable meetings and speeches, we have crops of rumours set afloat, most of them absurd, but none the less calculated to keep open the old sore. Legal proceedings are threatened, which, to an outsider, appear to have the very slenderest basis of action, and while we are told, on the one hand, that the political conflict once begun is to be carried into every phase of the local life, on the other, we hear that the issue of the election will lead to the abandonment of projected undertakings and the curtailment of others. Frankly, we put very little faith in all this. A man of business is little likely to abandon a good speculation because of the fate of his particular side in an election contest; and if he were there are others who will be ready to take his place. Nor is it at all probable in this instance that any mine will be started or kept going that was not certain of its fate before. The plain truth is that during the heat of an election things are said, if not done, to which no one attaches any particular meaning beyond the current moment; and it does no good to any person or interest to rake them up now. The sooner bye-gones become really bye-gones the better.

A boiler explosion which seems to call for very stringent enquiry took place near Calstock, but on the Devonshire side of the Tamar, yesterday. The scene of the explosion was Butts-pill Lead Mine, which has only just been re-started after being a long time idle. How the explosion occurred there is at present no direct evidence, the only person present in the engine-house being the unfortunate engine-man, John Adams, who has died from his injuries. Of course it will have to be shown that the boiler had been properly examined and found to be in working order, before it was allowed to be re-worked, if this casualty is to be allowed to come within the really accidental category.

## TYNE AND WEAR.

December 17.—The year 1885 is about to close, and it has been a year of trial and difficulty for most of the ironmasters, colliery-owners, and others engaged in the great industries of the district, and also a year of trial and difficulty for the workmen engaged in those industries. The volume of business done in most of those stable trades have been comparatively large, but prices have ruled low, unprecedentedly low, in the coal, iron, and many other trades. At the present time the steam coal trade in Northumberland is much depressed, the Baltic season having now closed, which always brings dullness in that branch of the trade, as the Baltic and North-East part of Europe is the principal market for this coal. In Durham the gas coal works are, on the whole, well employed, and this state of matters in that branch of the coal trade is expected to continue during the winter. The demand for household coals has also improved to some extent lately, and a slight advance has been made in the price of this description of coal. There is a good demand at present for Durham steam and bunker coals, and also for nuts and smelting coals. It is scarcely necessary to remark that the price of every description of coal continues very low. The demand for Durham coke has improved somewhat of late for inland consumption in the Midlands and on the West Coast, but there is still much need of improvement. The demand for coke for export has been more marked. The depressed state of the coke trade during the year has caused the stoppage of several pits in Durham, and has also caused the reduction of the output at many of the coking collieries. There is a strong demand for steam small coals, and it is remarkable that a considerable quantity of small coals are exported from this district to Germany, where they are manufactured into bricks or patent fuel, while this manufacture is almost entirely neglected here. Many of the ironworks and collieries are now contracting for the supply of all kinds of stores consumed at their works; and as all kinds of stores are offered at extremely low rates, this will operate in favour of manufacturers and colliery-owners, &c. The long-continued depression has retarded the introduction of improvements, but some progress has been made during the year with the introduction of the electric light for the purpose of lighting the surface works at collieries and also the underground works near the shafts, and it appears that we may now expect an electric lamp suitable for lighting the internal parts of mines, the result of the labours of Mr. Swan in this direction. The electric light has also been introduced at some large factories on the Tyne, and at shipping places on the Wear, where it is proved to be of the greatest service. The make of steel of all kinds will be greatly increased during next year on the Tyne, as large steel works of the most elaborate kind are now approaching completion at Elswick and at Jarrow. The chemical trade revived considerably during the year, and fair prices were realised for a few months, but the demand has again fallen off considerably, and the trade has suffered a serious relapse. The development of the salt



works on the Tees is expected to improve this trade considerably, as the cost of the main raw material on the Tyne will be considerably reduced. The lead trade has improved considerably during the year, and the price has advanced. Most of the yards on the Tyne have been cleared of stocks lately, the exports of lead from the Tyne are mainly to China. There is increased activity at some of the lead mines in West Durham, owing to the increased demand. We regret very much to notice the death of Mr. Alexander Blyth, the secretary of the Local Miners' Permanent Relief Fund, which occurred at Gibraltar last week. Mr. Blyth was connected with this valuable society from the commencement, he was, indeed, its chief founder, and he has conferred benefits on the miners and their families in this district most valuable and permanent. His death will be lamented by all classes connected with collieries, both miners and agents, in this district.

The Pig-Iron Trade has been fairly steady in tone throughout the week, and there has been no disposition to accept less money on the part of makers. Very little has been doing for the present year. The New Year is still looked forward to most hopefully, and there is much confidence that better times for this important trade may be expected. Stocks, however, continue to increase largely, and this is the worst feature of the trade. The stock will be over 500,000 tons when the year closes. The makers' hands have, however, been relieved considerably by iron put into the warrant stores for investment. The price of pig metal is at 32s. No. 3 and No. 4 forge, 31s. 1½d. for early delivery; 33s. for No. 3 is asked for next year. The manufactured iron trade is no better. The producers of iron on the Tees are doing much more in girders for building purposes, and it is expected that they will now cut the Belgians out of this trade. There is no change in the price of finished iron. The steel trade is improving. Coke is almost unchanged.

#### DERBYSHIRE AND YORKSHIRE.

December 17.—The approach of Christmas and the holidays, backed up by the frost, which was nearly general throughout the country towards the close of last week, led to a marked increase in the demand for house coal, more particularly from the inland districts. The London merchants who were well provided with stocks took advantage of the cold, and raised their prices 1s. per ton, although they, as a rule, had purchased at the ordinary rates. For this, the colliery proprietors are certainly most to blame; for there is no earthly reason why, instead of selling to merchants, they should not dispose of the products of their pits direct to the consumers, and to the advantage of both. There are a good many companies and firms that sell direct, and these, of course, reap an advantage that is denied to those who have to sell to merchants through their agents. In the former case profits are realised, but it is not always so as regards the others. Last week the London merchants, owing to the frost, advanced their prices 1s. per ton; but no such advance took place at the collieries, for at most of them the prices were about the same as they were in the previous month. This shows how advantageous it would be to the owners of coal mines, and to consumers as well, were they to sell direct, and so do away with the middle men, who make large fortunes, whilst those who supply them do not make ordinary interest on the capital expended, without taking into consideration the risks inseparable from coal mining, even when carried on in the safest manner dictated by science and experience. Derbyshire, as usual, has sent a large tonnage of coal to the London market during the past week, whilst prices have admittedly been rather firmer than what they were; but no general or scarcely an individual advance has been made known. Silkstone coal from several of the leading collieries is now quoted as low as from 8s. 6d. to 9s. per ton, whilst the "top-hards" are at least 1s. per ton lower. Steam coal has not improved much, excepting as regards some of the railway companies, which just now take a larger quantity, so as to be prepared for the holidays when the pits are standing, and the locomotive consumption is heavier than usual owing to the excursion and other trains which put the mineral traffic on one side for a short time. In the West Riding of Yorkshire the collieries have worked better of late, full employment being now the rule, all the notices handed in by the men having been withdrawn. Good contracts are held by several of the leading firms and companies for gas coal for the supply of works in London and other large centres. In this department Messrs. Newton, Chambers and Co., of the Thorncliffe Collieries and Ironworks, take the lead. Their gas coal is of a very high quality, and it is well cleaned and screened; it is deservedly in good request. Hence it is we find there was sent from the pits belonging to them to London alone close upon 34,000 tons in the course of the last month. The same firm, it may also be said, are noted, not only in London, but in our own as well as foreign markets, for their specialities in all kinds of ornamental stoves, grates, mantelpieces, and other work in iron, in which chasteness of design, elaboration of detail, and sharpness of casting and finish are leading features, and in this department Mr. Dawson, one of the partners, is not likely to be left behind by any of his competitors, numerous as they are. In steam coal there has not been much change so far as the collieries in Derbyshire and South Yorkshire are concerned. In the former county there is still the want of a shipping port within an easy distance; but there is no reason why the colliery-owners should not now take advantage of Boston, to which there is a line with particularly easy gradients from Nottingham, and belonging to the Great Northern Company. The latter runs through a very extensive coal field by means of their Derby and Nottingham line, so that there would be no difficulty in making Boston a by no means unimportant coal shipping port. It is different with the South Yorkshire district, as the colliery-owners in which are able and do send large quantities of coal to Hull and Grimsby for exportation, whilst Goole, a sort of inland port, as it has to go to the Humber to get to the sea, now ships a large quantity of coal to London, Gravesend, Portsmouth, Plymouth, and other of our home ports, and has also opened up a considerable trade to more distant parts of the world, vessels loading for the West Indies, the Baltic, and San Francisco. The waterway between Goole and Hull is now being improved at a considerable expense by the Aire and Calder Company, and when this is completed there is no doubt that Goole will become a far more important station for the shipment of coal from the West Riding collieries than it has previously been. In engine coal business has been but moderate of late, and as the competition for what trade there is has continued keen, remunerative prices may be said to be out of the question.

Some of the old Sheffield industries have looked rather better during the past week, for the manufacturers have given out orders more freely to their workpeople, but in all probability this will result in the increasing of stocks. Masters, however, appear desirous of giving their hands the means of tiding over the holidays in the usual manner. Makers of Bessemer steel have kept well going, and just now there appears to be some good orders in hand for rails for the home as well as other lines, whilst there is also a fair demand for billets. In crucible steel the trade is of a moderate character, but shows every promise of being brisk in the early part of the ensuing year, consequent upon the activity which is now sure to take place at the leading shipbuilding yards, if only on Government contracts. In edge tools, files, and saws, business has not moved onwards, but some of the makers have

been able to keep their hands fully employed, but this can scarcely be said to be the rule. Towards the close of last week there was a considerable run upon skates, consequent upon the severe frost that set in, and which appeared likely to last for some time. But the frost has disappeared, and orders for skates are now out of the question; but, in the event of a change, there are considerable stocks in hand that will meet any pressing demand that may be made upon manufacturers. The leading cutlery establishments are now working very fairly, but there is no doubt that a good deal of what is being produced will have to go into stock. The demand for table, pocket, and fancy knives is slightly better as regards the home markets, but the American and general foreign trade has ruled dull for some time past for nearly all kinds of hardware. In engine tools a moderate business only is being done, whilst the machine shops are comparatively quiet. At the railway wagon works the men are fairly employed on both new work and repairs, whilst some of the foundries are kept tolerably well going on stove grates and gas material. The colliers in the Sheffield district have worked rather better of late, the demand, as usual at this time of the year, running upon house and gas coal.

#### LANCASHIRE.

December 17.—Generally a quiet tone has characterised the Iron Trade of this district during the past week, but this is due more to the usual contraction of buying with the close of the year than to any material alteration in the actual condition of trade. Prices remain steady at late rates, and in hematites the recent advance is being maintained without difficulty, 53s. less 2½ delivered equal to Manchester being the minimum quotation for good foundry qualities, whilst in some instances 55s. less 2½ is being quoted. For common pig-iron local makers are firm at 39s. to 39s. 6d., and for the better class district brands at 39s. to 40s., less 2½ delivered here, the lowest sellers not quoting under 38s. to 39s., less 2½. With the exception of hematites, there is, however, so little actual business doing that quoted rates are scarcely more than nominal. In outside brands, the tone, if anything is rather easier, but good foundry qualities of Middlesbrough are not to be got at much under 41s. 4d. net cash, delivered equal to Manchester. In the manufactured iron trade business continues extremely slow, with makers very generally prepared to accept 5½ 2s. 6d. for bars delivered into the Manchester district where buyers can offer prompt specifications, although 5½ 5s. still remains the basis of quoted list rates.

The condition of trade in the engineering branches of industry remains much the same as last reported. Slackness prevails generally, and there is a continued absence of any weight of business in prospect.

In the Coal Trade there is generally an active demand for house fire qualities, and the pits are kept on full time, but this is not backed up by an improvement in the requirements for iron-making and other manufacturing purposes, and no better prices are obtainable; the common qualities of round coal and engine classes of fuel being plentiful in the market, and offered at very low figures. For house fire coal at the pit mouth prices remain at about 9s. for best Wigan Arley, with 9s. 6d. being got in exceptional cases, and 8s. for some of the best second qualities, but ordinary Pemberton Four-foot and inferior descriptions of Arley do not average more than about 7s. to 7s. 6d. per ton, and common house fire coals can be got at under 6s. per ton. Common round coals for steam and forge purposes are to be got at about 5s. 3d. to 5s. 6d., burgy from 4s. to 4s. 6d. according to quality; best slack 3s. 6d. to 4s., and common sorts 2s. 6d. to 3s. per ton.

In the Shipping Trade there is a fair business doing where sellers are prepared to take low prices, but it is difficult to get more than 7s. to 7s. 3d. per ton for ordinary qualities of steam coal delivered at the High Level, Liverpool, or the Garston Docks.

#### SOUTH WALES.

December 17.—The shipments of coal in the month of November were as follows:—Cardiff, 612,922 tons foreign and 89,993 coastwise, with 13,061 tons patent fuel; Newport, 120,159 tons foreign and 96,032 coastwise; Swansea, 70,363 tons foreign and 52,559 coastwise, with 11,305 tons patent fuel. These amounts show an increase upon the corresponding month last year at Cardiff and Newport, but a decrease at Swansea. Last week Cardiff sent away 133,113 tons foreign and about 23,000 coastwise, with 2645 tons patent fuel; Newport, 40,333 tons of foreign and 21,914 coastwise; Swansea, 20,316 tons of foreign and about 13,000 coastwise, with 4729 tons patent fuel. Some large contracts were given out by the Austrian Lloyd's and the Admiralty at Cardiff last week. The patent fuel trade is slack, but small steam coal is in good demand; while the accession of cold weather has made the house coal trade very active. Quotations in the latter commodity stand at from 8s. 3d. to 8s. 9d. The outward freight market is good.

The amount of coal sent by railway to London from South Wales in November was satisfactory. The Aberdare Company sent 6700 tons by the Great Western, and 4700 by the London and North-Western. Bwlfa sent 4700 tons, Blaenau 3600, and Nixon's Navigation, 4900; Fforchaman sent 3400, Hirwain Tower Graig 2400, Plymouth Iron Company 3200, and Aberaman 2700. The Great Western also carried quantities from Cwmdare, Aberdare, Merthyr, and Cymmer. The London and North-Western also carried 2000 tons from Aberaman, 1500 from Bwlfa, 1100 from Aberdare Thomas, and 1400 from the Rhondda Mountains. The Midland took 1600 from Aberdare, and the Great Northern 2500 tons.

The amount of iron and steel exported in November from Cardiff was 11,427 tons; Newport, 7150. The total amount for the first 11 months of the year from Cardiff was 72,926; Newport, 99,495; Swansea, 3571. The quantity sent away last week from Cardiff was 2477 tons, and Newport 4310. Iron ore arrived at Cardiff last week to the extent of 10,148 tons from Bilbao, and 2344 from other places; Newport received 4500 tons from Bilbao, and 1505 from other places.

As regards the dispute as to whether the iron and steel works of South Wales are active or not, it may be stated that, as compared with other parts of the country, there is not much fault to find; but if it be stated that profits are satisfactory, and work plentiful, it is not the fact.

In the Tin-plate Trade business is active, and prices somewhat better. The amount exported in the first 11 months of 1885 show an advance of 9444 tons over the corresponding period of 1884.

THE LONDON DIRECTORY FOR 1886.—At the earliest possible moment after the General Election, Messrs. Kelly and Co. have brought out their annual volume, than which no more serviceable, and, indeed, indispensable, book is issued from the Press. As becomes a book universally and continually consulted, it is edited with scrupulous care, and its millions of names and figures and facts are a marvel of accuracy. The volume for next year is just 20 pages longer than its predecessor—six of the additional pages being in the Streets directory, one in the Commercial, and five in the Trades. The Parliamentary Directory is compiled from returns made up as late as last Friday, and in the Official Directory we find the list of the London School Board complete, though the Chairman and Vice-Chairman were not elected till after the beginning of the month. An excellent map, corrected up to date, and showing the new street from Bloomsbury to Piccadilly accompanies the Directory.

#### NORTH AND SOUTH STAFFORDSHIRE.

December 17.—The collieries are fairly supplied with boats and trucks demanding alike manufacturing and household fuel. At some of the mines boats are arriving more rapidly than they can be filled, but these instances are exceptional. None of the collieries are making full time, and at certain of them which are not favourably situated for railway and canal traffic work is very irregular. List quotations for coal and slack have undergone no official variation, but realised prices are unsteady, and vary with different coalmasters. Forge coal is quoted at about 8s. per ton; furnace and household coal, 9s. 6d. and 10s.; steam (or locomotive) coal, 6s. 6d.; slack, 4s., 4s. 6d., and 5s. per ton, according to quality. These are the approximate list rates.

In the Pig-Iron Trade stocks have increased during the past month, but it is expected that better enquiries will be shortly forthcoming in view of the next three months' requirements. Unremunerative prices only are being realised. The quotations for best all-mine pigs are 57s. 6d. down to 55s. The recent price for medium foundry pig is being maintained, while for common makes the rates vary from 35s. down to 32s. 6d. Hematites are stronger by 1s. per ton, mainly in consequence of the large demand which is beginning to be expressed from America. The quotation for good Welsh sorts is now 54s. per ton delivered here. Also as a result of purchases which are being made on United States account, purple ore is quoted at an advance of something like 2s. per ton, firmer prices are asked for hematite ores, and steel rail crop ends are said to be worth 5s. per ton more. Prices in the finished iron trade are without change for the week, and Alderman Avery's award upon the wages question is anticipated with interest. Whatever amount of reduction he may declare, the blast-furnace men will be called upon to submit to a similar drop.

At Dudley, on Monday, an adjourned conference of colliers was held. It was unanimously agreed to arrange a meeting with the employers for an amicable settlement of the wages question. A committee was appointed to draw up replies to questions submitted by the Royal Commission on the Depression of Trade. The North Staffordshire Miners' Federation, which is affiliated with the Lancashire and Cheshire Miners' Federation, have decided to withdraw the notice recently issued for an advance in wages of 10 per cent. The reason assigned for this step is that the other counties not being unanimous on the question of the increase, the North Staffordshire Federation decline to imperil their own trade by enforcing the notices.

#### FOREIGN MINING AND METALLURGY.

Business in the French Iron Trade appears to be in a weaker state than ever, and prices have fallen to an extraordinarily low level. Merchants' iron, for instance, can be purchased at 5½ 4s. per ton. It is, hoped, however, that the spring will bring with it some change for the better, as orders will shortly be given out by the great railway companies, while there are also some considerable public works in hand. The German iron trade has shown continued dullness, and prices have been tending downwards rather than otherwise. Spiegel pigs, containing 10 or 12 per cent. of manganese, can be procured at 2½ 4s. per ton, while refining is not worth more than 2½ per ton. Bessemer pig has fallen to 2½ 3s. per ton. Iron of various descriptions has been a good deal pressed for sale. Bars have made 4½ 19s. per ton, and girders 5½ per ton. The best boiler-plates can be obtained at 7½ 3s. per ton. The number of furnaces in blast in Germany at the close of October, 1885, is returned at 148, as compared with 145 at the close of October, 1884; the means of production have, it will be seen, been increased during the past 12 months, and this has necessarily aggravated the existing depression. The exports of metallurgical products from Germany in October amounted to 104,491 tons, as compared with 95,777 tons in October, 1884. In the first 10 months of this year the aggregate exports were 854,071 tons, as compared with 887,230 tons in the corresponding period of 1884. The exports of rails from Germany in the first 10 months of this year were 133,650 tons, as compared with 113,938 tons in the corresponding period of 1884.

The general condition of the Belgian Iron Trade must still be pronounced unfavourable, although prices have presented scarcely any change. The tendency to make concessions from the rates nominally current has, if anything, become more decided. No. 5 Luxembourg casting pig has made 17½ 14s. 6d. per ton, while refining pig has brought 17½ 11s. 2d. per ton. In the Charleroi district the basis price of No. 1 iron may be given at 4½ per ton. Girders have ranged from 3½ 18s. to 4½ 6s. per ton. The maximum price for No. 2 plates has been 5½ 4s. per ton, with concessions in the case of considerable contracts or transactions on export account. The Franco-Belgian Company has secured a contract for bridges for the Dutch colonies, the tender delivered by the company in connection with this affair was the lowest submitted. The imports of iron minerals into Belgium in the first 10 months of this year amounted to 1,156,675 tons, as compared with 1,278,815 tons in the corresponding period of 1884. The exports of iron minerals from Belgium in the first 10 months of this year were 140,256 tons, as compared with 161,714 tons in the corresponding period of 1884. Steel rails were exported from Belgium in the first 10 months of this year to the extent of 41,943 tons, as compared with 51,309 tons in the corresponding period of 1884. The exports of iron rails from Belgium in the first 10 months of this year were 8476 tons, as compared with 15,113 tons in the corresponding period of 1884. Plates were exported to the extent of 26,465 tons, against 33,801 tons; and other descriptions of rolled iron to the extent of 182,076 tons, against 183,527 tons.

Recent cold weather has had the effect of increasing the demand for household coal upon the Belgian markets. Industrial coal has, on the other hand, been a good deal neglected. Prices have been pretty well maintained, except for coke, which has been pressed for sale. The number of trucks carrying coal and coke which passed over the Belgian State Railways in the week ending December 6 showed an increase of 189 as compared with the corresponding number of trucks in the corresponding week of 1884. The imports of coal into Belgium in the first 10 months of this year amounted to 1,015,823 tons, as compared with 1,005,998 tons in the corresponding period of 1884. In these totals English coal figured for 238,937 tons, and 231,895 tons respectively. The imports of coke into Belgium in the first 10 months of this year amounted to 19,552 tons, as compared with 28,000 tons in the corresponding period of 1884. The exports of coal from Belgium in the first 10 months of this year were 3,525,636 tons, as compared with 3,798,260 tons in the corresponding period of 1884. In these totals the exports to France figured for 3,256,779 tons and 3,570,473 tons respectively. The exports of coke from Belgium in the first 10 months of this year were 714,289 tons, as compared with 713,396 tons in the corresponding period of 1884. Coal quotations have ruled low upon the French markets, the demand for industrial coal having greatly fallen off. The production of coal in the districts comprised in the German Customs Union amounted last year to 57,233,875 tons, as compared with 55,943,004 tons in 1883. The production of lignites last year was 14,879,945 tons, as compared with 14,499,644 tons in 1883. The value of last year's coal production was estimated at 14,939,000.



## Meetings of Public Companies.

## BLUE HILLS.

A 16-weekly meeting of shareholders was held on Friday, the 11th inst.—Mr. WALTER PIKE presided.

Labour costs were 1465*l*.; merchants' bills, 373*l*.; a total of 1838*l*.; 35 tons tin sold, realising 1839*l*.; extra carriage brought 17*l*.; a profit on the working of 18*l*.; this reduced the balance against the adventurers to 721*l*.

The report of the agents (Captain W. Rich and Captain S. Bennetts) stated that the 80 was extended 83 fms. east of the engine shaft. The lode in the end was without tin to value, but they were urging on the drive, by six men with the view to intersect the run of tin ground seen in the 66, which was ahead of the 80. They had put on a short cross-cut north in the bottom level to prove if there was any more lode standing in that direction. They had cut a small branch, but it was not of any value. In the 66 east they had lately come into contact with one of the lodes having a contrary dip, or underlie, which had cut off the main tin lode. They had, however, put out a cross-cut north and again intersected it, and found it was letting out water freely, and contained good tin stones, worth probably, as far as yet could be seen, 20*l*. per fathom. That level (the 66) had been driven over 20 fms. in a lode, worth on an average 20*l*. per fathom. The stope in the back of the 66 east of the rise was worth 9*l*. per fathom. Since the rise referred to had been communicated with the 50 they had had good ventilation in the eastern part of the mine. The lode in the 50 end east was of good size, and carried stones of tin. They were forcing on that level, and hoped to intersect the run of tin seen in the level below. The stope in the back of the 50 was worth 12*l*. per fathom. There was a very promising lode in the winze sinking below the adit adjoining East Blue Hills. They were, however, obliged to suspend operations on account of the influx of water, but as soon as that abated the sinking would be resumed. There was a great extent of unexplored ground east of Letcher's shaft, and they were urging on the drives in that direction. The 66 was the pioneer level in the mine, and was productive for tin. They hoped, therefore, to soon make fresh discoveries in the drives above and below that level.

Captain RICH, replying to Mr. JAMES WICKETT, remarked that the 66 had been driven 23 fathoms in excellent ground. Before them were from 300 to 400 fathoms of unexplored ground. Their average produce was very good, being from 70 to 80 lbs. to the ton of stuff. Few mines in the county could excel that produce. There was no better tin-ground in the county than in Wheel Betsy. They had provided much new work, and everything had been charged up. They hoped to have in the 80 the good lode they had in the 66; if they succeeded in this they would have an excellent point. There was every prospect they would keep up their returns. (Hear, hear.)

Mr. WICKETT observed that were Blue Hills shares quoted at the same rate as other St. Agnes mines, each share would be of the value of 4*l*.

The CHAIRMAN added that he concurred in Mr. Wickett's opinion. Captain RICH said nothing could be better than their prospects.

The CHAIRMAN proposed the adoption of the accounts. He observed that, in comparison with last time, the profit was small. This, however, was not due to any falling off in the mine—there had been a slight increase in the returns of tin—but to extra expenses incurred in tutwork in exploring the mine. The manager had alluded to the improved prospects of the mine. There were few mines in St. Agnes that had such favourable features as Blue Hills. (Hear, hear.) All must have been glad to have heard Captain Rich predict that not only would they be able to maintain, but increase their returns. They should, in that event, apply profits to develop their property. He agreed with Mr. Wickett that Blue Hills should stand much higher in the Share Market, and probably the reason why the shares were not dearer were because holders did not wish to sell. Were the mine in the Camborne or Redruth district, its shares would be 10 times their present price.—Mr. JOHN MAYNE (Pool) having seconded the adoption of the accounts, the motion was agreed to, and the meeting closed.

## THE ASIA MINOR MINING COMPANY.

The fourth ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Monday.

Mr. ARTHUR A. LEVY in the chair.

Mr. PHILIP A. EAGLE (the secretary) read the notice calling the meeting, and the report and accounts were taken as read.

The CHAIRMAN said the first thing he had to call attention to was the balance-sheet, which dated only to the 31st December, 1884. This balance-sheet showed an adverse balance of 5701*l*. 9*l*. 1*l*. This was a heavier amount than the directors anticipated, but the present board had made the worst possible of a bad matter. He would call attention to some of the figures. The amount to the credit of revenue account on the 31st December, 1883, was not brought into the present account, but was written off the capital account at the time. Had it been brought forward it would have reduced the loss on the 1884 working by that amount. If they would refer to the expenditure on development of mine they would see that the directors had this year drawn a much harder line than in the previous year; they had written off 1000*l*. more, in proportion, than before, and had taken one-fourth instead of one-third. If they referred to the revenue account they would see that the amount of depreciation was 1274*l*. which was more than double what they wrote off in 1883. In 1883 it was 637*l*. which was written off. In doing this the directors had made up their minds that, if they erred at all, it should be on the side of safety, so as to let the shareholders know the worst which could be made of the accounts. These accounts had been delayed from various circumstances, amongst others the dismissal of the former manager, and the disorganisation thereby caused. The directors trusted that in future they would not keep the shareholders waiting 12 months before presenting accounts. In spite of that 3700*l*. which need not be taken off the accounts, the report still showed a heavy loss. This was attributable, in many ways, to the improvident contracts made by the recent manager. Many of these contracts, as they would see by the reports from the different officials, had been much altered and reduced. In 1884 the transport charges from the mine to the port were nearly 6*l*. per ton. The directors had now the power to bring the ore down from the mine to England for 6*l*. per ton, and the saving would be very nearly 4*l*. per ton, which, in itself, would have left a handsome profit. The past had been unfortunate, and this was partly, and to a large extent, to be attributed to the severe depreciation which ruled in 1883 in the price of silver and lead, compared with what it was now. From November 14th, 1884, to October 31st, 1885 (dates which were touched upon very fully in the manager's report), he thought, himself, and he believed his co-directors agreed with him, that they had made both ends meet, if not something more. (Hear, hear.) They had received by the mail delivered about a week ago the so-called profit and loss account for that period, and it showed the total expenses incurred on revenue account of 21,500*l*. Turkish money. For this they had a produce of 1494 tons, which would bring the cost of each ton of ore to 14*l*. Turkish money, equal to 12*l*. 18*l*. sterling. That ore had been sold at an average price of something over 15*l*. 18*l*. and the expenses to England, including all charges, being something under 2*l*. per ton, this would, roughly speaking, leave a profit of fully 1*l*. per ton. That 1*l*. per ton would have been considerably increased had they not had to dispose of a very large number of officials, who had been dismissed since they dismissed the former German manager; and the amount paid to those gentlemen in the time under review amounted to 1000*l*. In the early part of the year the freight from the mine to the port were as follows:—In December, 4*l*. 5*l*. Turkish pounds; January, ; February, ; March, 3*l*. 10*l*.; April, 3*l*. 6*l*.; May, about the same; June, 3*l*. 1*l*.; July, 2*l*. 14*l*.; all Turkish pounds, and for the last four months the average was 2*l*. 10*l*. Turkish pounds; so to-day the accounts would have shown about 2500*l*. profit had they to do the same work again, because the expenses had been very considerably reduced. Therefore, he hoped the profits in the next account would show better, as they

were not likely to have to go through the same trials as before. He would briefly touch upon the proposals before the meeting. The meeting had been called for the purpose of considering the report, and also deciding upon the future course of action. The company was in a fairly sound financial position to-day. The figures showed that they had in ore in England, or at the port, or at the mines—he meant all dressed ore—sufficient to cover the whole of the company's liabilities up to the month of February, and for all bills which had been accepted by the company, and all bills which had been drawn by the company on agents there, for which the company had to provide money. The question was as to the best plan to be adopted for the future. The directors recommended a certain course to be adopted. On that he could say but little, as part of it referred specially to his own firm, and he would leave it to other people to discuss whether it was desirable to make that contract. In conclusion, the Chairman moved the adoption of the report and accounts.

Mr. J. BERGTHEIL, in seconding the motion, said he stepped in at a time when everything seemed in confusion, and made an entirely provisional contract. He had no power to bind the board or the shareholders, nor did he intend to do so; but he stepped in and got the best bargain he could make at the time, and submitted it to the shareholders. The shareholders did not say "Yes" or "No," but left it to the board to do the best they could. Month after month applications came from the mine that the directors should send letters of credit, and it was an unpleasant thing to discuss meeting after meeting whether they should go on sending letters of credit. He was happy to say that so far they had provided ample means, and, as Mr. Levy had told them, the accounts were better. This state of things could not last; it naturally injured the concern, and did not place the directors in the position they should be in. The directors had come to the conclusion that they would like to make a better bargain, but they could not make a better bargain, and, therefore, the best thing for the shareholders to do was to accept it. The first letter provided that Messrs. Levy and Co. should be the permanent agents; but now, in the second letter, Messrs. Levy consented to be the agents only so long as money was owing to them. Then the shareholders would be in a position to appoint whom they liked. Messrs. Levy would find 7500*l*. If 7500*l*. was subscribed amongst the shareholders, and he did hope he would have been able to come before the shareholders and say that the money was raised, but things had changed. The directors were satisfied they could not make a better bargain, and they must make this arrangement or something similar or the mine must be stopped altogether. Some positive arrangement of some kind must be come to. (Hear, hear.)

Dr. PFEL (of Hamburg), who said he held 1600 shares, and represented a number of German shareholders, said he did not despair of the company, nor of the mine. The mine was formerly worked by a company in Hamburg, and after the money was exhausted they gave 20,000*l*. out of their own pockets to keep the workings up. Only when that was spent did they think of selling the mine, and he believed it was sold at a very cheap price. The Chairman had stated that the money would last till February, and if no one came in in the meantime they would be at the end of their money. There was no doubt that the management at the mine had been unsatisfactory, and perhaps not altogether satisfactory in London. A change must take place. He had been in London since Thursday, but had not yet made up his mind what must be done. He thought the report should have been sent out at a longer date before the general meeting. Therefore, he moved the meeting be adjourned for a month, and by that time he should be able, either by himself or some one else, to vote for the German shareholders, and he thought it would be possible to prepare things so that the meeting would be a very short one.

Mr. SCHAFER seconded the motion.

Col. BAKE thought that the mine, instead of being bought cheap, was bought very dear. It was said that the mine produced 18 to 20 per cent. of metal. He stated at the last meeting that it did not come to more than 5 per cent., and now it was only 8 to 10 per cent. Therefore, the shareholders did not get half the percentage of metal which was represented to them. When he was visiting the mine he did not like the manager they had there. He was an excitable man, and did not appear to be a clever man, and it turned out in the end that the manager was a madman. As regarded the arrangement with Messrs. Levy, he did not think they would find anyone to carry out the work more cheaply. Mr. Levy had served them faithfully, and, therefore, instead of throwing obstacles in the way, the best thing the Germans could do, having got the price, was to carry out the arrangement.

Mr. R. V. SMITH said he did not really see any reason for an adjournment for one month, but as it was desirable that the German and English shareholders should be of one mind, he was prepared to support the amendment for an adjournment unless he heard that such a course would be deleterious to the company.

Mr. R. HAMILTON also thought that if there was a prospect of some definite arrangement being come to between the German and English shareholders, it would be very desirable to accept the adjournment.

Dr. PFEL: Whatever we propose will be in the interest of the company, and not in the interest of one or other of the shareholders. (Hear, hear.)

Admiral Sir JOHN COMMERCIAL, Bart., said he had been out at the mine twice, and did not think they gave too much for it; and if these squabbles were put by, and they had proper management, it could be brought to a high state of efficiency, and be of great value. (Hear, hear.) He was the largest shareholder, and had put his hand in his pocket, and therefore his view might be taken as correct. One of the great difficulties they had had to contend with was the narrow and difficult bridge path by which the ore was carried to the port, and immediately he saw the road was in better order he invested more largely. No doubt their late manager was a man of indomitable perseverance, an energetic man, and a great knowledge of how to deal with the Turks; but at the same time he had great defects, and was very excitable, and great irregularities were allowed to be carried on at the mine. He hoped the economy which had been inaugurated, and which he hoped would be extended still further, especially in connection with the underground workings, would be very effective. For the last 12 months, until lately, they had really had no one to direct the underground working of the mine. Mr. Trevelyan was an excellent man, but if he were three men knocked into one he could not be everywhere. During the last 12 months the mine had been worked, if not at a profit, very close to a profit, and if they had had proper underground workers to see that the mine was properly worked, they would be better off now. He thought things were looking brighter. He believed the property was an exceedingly valuable property. Instead of a bridge path they had now a fair road, capable of transporting the mineral to the port on wheels. They had quite enough buildings to last them for 20 years. They had good dressing floors, which would require to have but little expended upon them. They had no necessity for any further increase of the capital, all they required was a certain amount of money to work during the winter until the ore-producing months came round. He had every confidence in Mr. Levy, and should be happy to subscribe largely to the debentures, and he hoped the other shareholders would do the same. (Hear, hear.) If they differed amongst themselves and withheld the money they would drift into liquidation, and it would be bought cheaply by others persons who would make it a success. If, as the largest shareholder, he could assist them in any way in carrying out the operations he had brought before them he would do so, and he would join a proper board of directors who would carry out honestly and ably what he believed to be for the benefit of the company. (Cheers.)

The CHAIRMAN said he would make a short statement. He would suggest that the report should be adopted, with the exception of the following paragraph:—"Under these circumstances the directors recommend the adoption of the arrangement with the agents as set forth in the circular of Mr. Bergtheil, dated the 29th July, 1885."

Leaving that out he suggested that the report and accounts should be adopted, and the ordinary business concluded, and then let the future financial arrangements be postponed for a month, as asked

for by Dr. Pfeil. In August last the meeting was adjourned at the special request of the German shareholders, and his firm found the capital to carry on the company during the three months without additional charge. He was now again asked to do the same thing. If any shareholders would assist him in finding the money he should be glad of such assistance, if not he would do it himself. (Hear, hear.)

Dr. PFEL said that part of his suggestion was that the election of directors should be postponed.

The CHAIRMAN said that if that were postponed it would also postpone the election of Admiral Commercial on the board, and he should very much like to have the assistance of that gentleman during the next month. (Hear, hear.)

Dr. PFEL said he would accept the nomination of Admiral Commercial.

Colonel BAKE supported the suggestion that he should be requested to join the board.

The report, with the exception of the paragraph referred to, was then carried.

On the motion of the CHAIRMAN the accounts were then passed. Mr. REEVES suggested that any proposition which came from the German shareholders should be sent over in good time.

Dr. PFEL said he would do his best that this should be done.

Mr. COCHRANE also pointed out the desirability of having the German proposals in the hands of the shareholders at least a week before the adjourned meeting.

The CHAIRMAN said no doubt the shareholders would like to hear a few words from Mr. Green, who had visited the mine, and had come from Wales.

Mr. GREEN said the shareholders knew the capacity in which he had been acting since his journey out to the mine in 1884. It was proposed he should make a second journey out there, and a power of attorney was prepared for him to take with him, and to deal with the mine in the best interests of the company. When he arrived at the mine he found that, instead of the power of attorney giving him full authority, owing to the wording of it, and the action which the then manager took, he was placed in a strange dilemma. The power of attorney only gave him power to act in the absence of the manager, who had been instructed by the directors to come to London. The manager refused to leave the mine, though he (Mr. Green) told him he should carry out his instructions whether he went or remained. The remittances were withheld, and the manager was glad to get away. On his (Mr. Green's) return to London the directors asked him to give advice, as consulting engineer. He had made another journey out, and he was as confident as ever that the property was good, and that the mine would be made a paying concern. He had spent three months there on separate occasions. Notwithstanding the economies which had been carried out there were other economies still in abeyance, and an important one was the extraction of the ore from the mine. The persons selected to superintend the underground works were only coalminers, and had had no experience of metal mines, and therefore could not extract it economically. He went at some length into a description of what should be done, referring especially to an improvement in the system of stopping, in the inclines, and other matters connected with the working. He said everything was right on the outside of the mine, but he did not think that, for two years, they would be in a really proper working position in the inside of the mine, still if no delays took place profits can be made next year. He mentioned this to make the gentlemen from Hamburg arrive at a proper conclusion.

The CHAIRMAN then proposed a vote of thanks to Mr. Green, which was carried unanimously.

A vote of thanks was then passed to the Chairman, and the meeting was adjourned to the 21st January next. In the meantime the financial arrangements will be considered, and the result submitted to the shareholders.

## BRATSBERG COPPER COMPANY (LIMITED).

An extraordinary general meeting of shareholders was held at the offices of the company, Austin Friars, on Thursday.

Mr. J. H. MURCHISON in the chair.

This meeting was an adjournment of the meeting held on the 22nd October last, for the purpose of considering the financial position of the company, and, if thought expedient, of resolving to increase the capital by a sum not exceeding 15,000*l*., making the total capital not exceeding 75,000*l*. A note appended to the notice calling that meeting stated that the additional money was chiefly required as working capital, or floating balance to meet the monthly costs, which would save much expense and inconvenience. Part of the new capital is required to work Næsmark, the ores of which are stated to be exceptionally rich in quality. At that meeting a discussion took place regarding the constitution of the board of directors, some of the gentlemen having retired, and a wish being expressed that the other members should also retire, in order to permit of the board being reconstituted.

Mr. H. C. MURCHISON (the secretary) read the notice calling the meeting.

The CHAIRMAN said this was an adjourned meeting.

Mr. BARKER: Have you anything to say, Mr. Chairman?—The CHAIRMAN: No; you know the object of the meeting.

Mr. BARKER: I thought you might be able to report progress since last meeting.

The CHAIRMAN said the position was this that the shareholders had sent in a requisition for a special meeting, and when that meeting was held the whole question would be gone into.

Mr. BARKER asked what day had been fixed for the meeting?

The CHAIRMAN said no day had yet been fixed. If the directors did not fix a day for the meeting the shareholders knew very well what course to pursue. It was important that the shareholders should be acquainted with every circumstance connected with the company, more particularly with the progress and results of the past year's operations. He had been expecting to receive this information for some time past, and certainly they were expected this week. As soon as the necessary details were received a regular balance-sheet would be made out, or at any rate something showing the result of the past year's operations.

Mr. J. C. STEWART: Then nothing can be done?

The CHAIRMAN said it was an adjourned meeting for the purpose of increasing the capital of the company.

Mr. STEWART asked whether nothing could be done to annul the present personal unpleasantness which existed?

Mr. McMILLAN said he must protest against such an observation. It was a most improper observation to make.

Mr. STEWART said he was afraid the interests of the company would be prejudiced, and that neutral parties would suffer. It was not good for the interests of the company that these differences should continue. The interests of the company would be seriously impaired, and he thought it would be well if less attention were given to crushing one side or the other.

Mr. BARKER objected to these remarks.

Mr. McMILLAN said that Mr. Stewart was the auditor of the company.

Mr. STEWART said he was speaking rather as a shareholder.

Mr. BARKER: I have never heard the side of the Chairman; will he give us his view?—The CHAIRMAN said this was not a meeting for that purpose. A requisition had been sent in for the express purpose of calling a meeting, but probably before that meeting was held the shareholders would know all about the position of the company.

Mr. BARKER said that, practically, the Chairman refused to say when a meeting would be called, and, under these circumstances, the shareholders would have to take their own course. A requisition had been signed by about 120 shareholders, asking the directors to call a general meeting of the shareholders, in order that the present directors—Mr. Murchison and Major Heane—might be removed from office, the other directors having resigned.

A SHAREHOLDER said it was a great waste of time to have the meeting adjourned and the shareholders again called together. Two out of five directors had declined to retire, and those two gentlemen



refused to meet the wish of the committee, who were backed up by the vast majority of the shareholders. He moved that the meeting be adjourned for a month—to the 14th January next. Before that time he hoped the shareholders would have taken some steps.

The CHAIRMAN said that Mr. Barker was entitled to take his own view, but, at the same time, he had taken an entirely mistaken view. He (Mr. Murchison) was also entitled to his own view, and he believed that when they had heard his answer more of the shareholders would support the present course of action than at present.

Mr. BARKER asked whether the meeting had been called before the end of the month?—The CHAIRMAN: I cannot pledge myself to anything individually.

A SHAREHOLDER asked whether the yearly accounts would be forthcoming if the meeting were adjourned for a month?—The CHAIRMAN: We have a telegram to say that the necessary statements would be here to-day.

Mr. S. YORK and one or two other gentlemen expressed the hope that before the adjourned meeting Mr. Murchison and Major Heane would see their way to retire from the board.

The CHAIRMAN said that at the proper time he should have a full explanation of the course he had adopted.

Mr. BARKER said that if the remaining two directors would not retire steps would have to be taken to remove them.

The meeting then adjourned to the 14th of January.

#### WYNAAD PERSEVERANCE ESTATE AND GOLD MINING COMPANY (LIMITED).

The fifth general meeting of shareholders was held at the Cannon-street Hotel, on Tuesday, Mr. HENRY LAMB in the chair.

Mr. W. H. THOMPSON (the secretary), read the notice calling the meeting; the report and accounts were taken as read.

The CHAIRMAN, in moving the adoption of the report and accounts, said he thought the report dealt upon everything which the directors had to tell, but since it was written things had rather changed for the better as regards this company, both as regards the gold groups, and also as regards the cultivation.

The first point he would draw attention to was the proposal to raise 1000*l.* on 10 per cent. debentures. This proposition was made because the income for the ensuing year would not suffice to carry the company on without the 1000*l.* With that amount they could carry on for two years, or at least till they could pay their way with the present cultivation; but with more cultivation they must have more capital.

But, with the present cultivation, and with the 1000*l.*, the manager thought he could see his way to profitable results within a reasonable space of time. The 1000*l.* of debentures might be taken as having been subscribed, although there were 300*l.* still open to the shareholders who wished to avail themselves of them. But, even if they did not, no doubt all the 1000*l.* would be subscribed.

In connection with the paragraph in the report in which the directors expressed their anticipations that the 1000*l.* would be taken up, he referred to the proposed arrangement with the Mammoth Syndicate. This company had still to recover from the Mammoth Syndicate 600*l.* or 700*l.*, and the directors of this company proposed to cultivate a portion of the Mammoth estate with rhea fibre.

After the company had recovered what was due to it, it was proposed that the profits should be equally divided between this company and the syndicate. He might mention that Dr. Forbes Watson, who was an authority on rhea cultivation, was present, and would give practical information to the shareholders on the subject.

In his last report Mr. Adams stated what he had done with the rhea in the way of passing it through machines; he also stated that he had obtained 200 plants in August, 12 months ago, and on the 30th of November last they had 50,000 in the nurseries, and Mr. Adams hoped before the monsoon to have 250,000 ready to plant out, which would take 25 acres, and which would yield 1 ton per acre of marketable fibre at 30*l.* to 40*l.* per ton.

The cultivation was estimated to cost from 6*l.* to 8*l.* per acre; so the shareholders might anticipate a very profitable result from the cultivation of rhea. Mr. Adams said there were from 1000 to 1200 acres available along the stream in the Mammoth property, and by working the produce on the ground they would obtain the best fibre, and be able to return the residue to the ground, so that for some time it would not require manuring.

Why the directors had selected rhea under present circumstances was that it yielded immediate results, whilst with most other crops they must wait several years before they got anything in return for the money they expended. The cardamoms also were an item which yielded at a reasonably early date, and that cultivation also the directors were going in for.

Altogether the cultivation had been increasing gradually since the new manager took charge; the directors were satisfied with everything he had done, and believed they could not have selected a better man. (Hear, hear.) There was a suit now before the Court to enforce payment by a member of the syndicate of 150*l.*, and some other cases depended upon the result of that decision, but he was afraid that one member of the syndicate, who was in arrears 500*l.*, could not be hoped to pay. His colleague, Mr. White, would be glad to give every information with regard to the accounts. In conclusion, the Chairman moved the adoption of the report and accounts.—Capt. LEMMON seconded the motion.

Mr. WALTER JAMES thought the wisest plan would be to suspend the cultivation.

Mr. WHITE, referring to the mining, said there was no doubt it had been much neglected. The present board never thought that the gold mining was properly tested. (Hear, hear.)

Mr. WALTER JAMES thought the gold mining should be revived. (Hear, hear.)

The CHAIRMAN said they got 4 dwts. of gold to the ton for a month, but the expenses exceeded the result of the crushing. That was 18 months ago. Their neighbours now were getting a little more, and if this company had 1 or 2 dwts. more per ton it would be profitable.

A SHAREHOLDER: Who is our nearest neighbour?—The CHAIRMAN: The Indian Alpha Mine.

Mr. WHITE said the Devala Moyar was not far off, and there was also the Indian Glenrock. In fact, this company's property was in the midst of the field. (Hear, hear.)

The CHAIRMAN said there was no doubt the claim which was left by the old diggers was very rich.

Mr. POWELL strongly advocated a continuance of the cultivation. The nursery plants had been reared on this company's property to be grown on the Mammoth property, and the Mammoth property was coming to them for nothing as well as half of the profits, the Mammoth having the other half. He thought that sufficient prominence had not been given to the fact that this company's property was in close proximity to the extensive Indian Glasgow Alpha Skull property, and he believed the Chairman and secretary believed that this company was on the same reef as the Indian Glasgow property, and if so there was every reason why this company's shares should go from 5*s.* to 5*l.*

The board, by a resolution of the shareholders, were restricted from mining operations; but he hoped that before very long the shareholders would be called together to give the directors fresh powers to do something in the way of exploring the property. (Hear, hear.) The amount they were asked to raise for the cultivation of rhea could not do any harm, and it might do much good. He hoped the debentures would be raised in such a way that they could be paid off at any time.

The CHAIRMAN: They are raised for five years, but can be paid off at any time upon giving six months' notice.

Mr. BELL: The cultivation may pay expenses, but I hope the gold mining will not be dropped. There is machinery on the mine, all, I believe, in good order.

Mr. WHITE: All in good order.—The CHAIRMAN: We have really kept the company going in order to test the mine at any time.

Mr. WHITE: We are all believers in gold, and are large shareholders in other companies.

Mr. HENDERSON said that no doubt the time might come when the shareholders might wish to impress upon the directors the desirability of exploring for gold, and that steps be taken to recom-

mence mining. It would be well that it should be impressed upon the board that this was the wish of the shareholders.

The CHAIRMAN said that of course this would require more money. At the same time, he might mention that it was the intention of the board to make experimental tests. (Hear, hear.) He should not have remained on the board if he had not hoped of the gold workings. (Hear, hear.)

Mr. WALTER JAMES: You have done your duty faithfully and manfully.

Dr. FORBES WATSON, referring to the rhea cultivation, said the question was whether they were likely to grow rhea which would pay. They had this fact before them that they were growing capital rhea, and were able to grow it well. It was worth 38*l.* per ton, and the only question was whether they had got ground so good that it would answer to grow rhea upon it if they had the necessary capital.

The one fact was that they were able to prepare a material which was worth 38*l.* per ton. What would be the cost of producing it under careful management? It seemed that they could grow and prepare it, and place it in London at 22*l.* per ton. As to the demand for it there was no doubt that if they could produce it at 38*l.* per or 40*l.* per ton there would always be a good demand for it at that figure. The crop depended upon soil, management, and good water, and also plenty of manuring.

Mr. POWELL said it was an important point to bear in mind that the estate possessed great facilities as regarded water, both for cultivation and mining.

The SECRETARY read a proposal by an original shareholder to the effect that money should be raised by the disposal of a portion of the property to a subsidiary mining company.

The CHAIRMAN said the directors did not altogether endorse that proposal.

Mr. WHITE: You have power to raise money to the extent of 40,000*l.*, and why have a subsidiary company? You had better issue further capital in the existing company. (Hear, hear.)

The resolution for the adoption of the report and accounts was then put and carried.

Mr. Henry Lamb was then reappointed a director; and Messrs. Monkhouse, Goddard, and Co. re-elected auditors for the ensuing year.

A vote of thanks to the Chairman and directors closed the proceedings.

#### INDIAN CONSOLIDATED GOLD COMPANY (LIMITED).

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday (Mr. MALCOLM LOW, J.P., D.L., in the chair), for the purpose of passing a resolution to authorise the directors to dispose of a portion of the property. There was a very full attendance of shareholders.

The SECRETARY read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, I have, in the first instance, to ask your indulgence for the great inconvenience to which you have been put. It has been very distressing to us that you should have been put to so much inconvenience, but we did not expect so large an attendance of shareholders; and I think we may interpret this large attendance as a token of the encouragement and good faith we have in our undertaking. (Cheers.) It will be within your recollection that, acting on authority which you were good enough to entrust to us, we not long ago purchased for the company the leases of three properties in the Mysore gold fields. These consist of the Colar block and the Madras block, each roughly measuring half a square mile, and the Great Southern block, roughly measuring a quarter of a square mile, all three on the run, or fully believed to be on the run, of the great north and south champion reef, which is already yielding such rich returns in the Mysore Company's sett.

I show the position of these three blocks on the plan behind me. The plan is not drawn to strict scale, but it quite accurately shows the relative positions. Immediately adjoining the Mysore Company's property on the south is our Colar block of half a square mile, where our own mining operations are being vigorously pushed forward. Next, and still proceeding southwards, comes a block of a quarter of a square mile belonging to the Colar concessionaires; next, our own Great Southern block of a quarter square mile; next, the Mysore Reef Company's block; and, lastly, our own Madras block of a half square mile. Well, gentlemen, our purchase of these three blocks, aggregating 1½ miles, having been made somewhat in advance of the present general confidence in the establishment of a profitable industry in these fields, the investment is, we hope, one which will duly bring us those substantial advantages which foresight and promptness in action deserve. (Cheers.)

We think the time has now come when we may entertain proposals to dispose of a portion of this property to others on terms advantageous both to the buyers and ourselves. (Hear, hear.) We cannot ourselves work the whole extent of this property, and we may as well, if and when proper opportunity arrives, part with a portion of it on profitable terms. We therefore come to you, and ask you, as you before trusted us fully in the matter of the purchase of the whole, so now to trust us fully in the matter of the proposed sale of a part; and if you should be pleased to pass the resolution now before the meeting that will enable us to act for you, when the proper time comes, in the manner which we shall try to make best conducive to your interests. (Cheers.)

I should like to say that we do not at present contemplate selling more than, roughly, one-fifth of our total area, and that one-fifth will not be any part of the Colar sett in which we are now working. And having said this much, I appeal to you, both as shareholders having confidence in your directors and as men of business generally, not to press us for fuller details, either as to the precise portion of ground we think of selling, or as to the terms on which we propose to sell. That we shall not sell except for a handsome profit you may be sure; while if we were to go into any details whatever at this public meeting that could not do otherwise than hamper us in our arrangements, and prejudice the intended method of disposal. In a matter of this kind much must necessarily be left to the judgment of any board of management, and we have always been so kindly and generously supported by you, that we feel confident you will support us again on this occasion, and that you will pass this resolution with unanimity, trusting that in whatever we do we shall act with due care and prudence in the best interests of the shareholders. I repeat again that it is not contemplated at present to part with more than one-fifth of our total area, and that that one-fifth will not be any portion of the Colar sett, where our own mining work is going on. Well, gentlemen, of course, this is a special meeting called only for the purpose of passing this special resolution; but you will expect me to say a few words as to our current operations. In the Wynad, as you are aware, we are now mining at one point only—the Agnew reef. When we last met, in June of this year, we spoke of our disappointments in this district, arising not from lack of quantity, but from the poor quality of the ore. What I said, if you will allow me to repeat it, is this:—

"Yet there is the Agnew lode, a strong lode, an auriferous lode—I may say a master lode—lying under the most testing conditions of enclosing rock, both in dip and in strike; and we feel loth, while any hope remains, to leave it after all the good work that has been done. We keep looking at the matter again and again, and it keeps on recurring to us as a strong likelihood that this great auriferous vein cannot be everywhere poor, but must have in places rich deposits or shoots, if we have the steadfastness and the patience to find them. We therefore wish to give this vein a yet further trial by extending the north drives for some distance further into the interior of the mountain. As you are aware, rich shoots traverse a vein in a more or less diagonal direction, and so by extending our workings longitudinally we ought to come across them, and if we do we can then sink on them fast enough, but until we do our chances are better by driving than by further sinking. The present face of our lowest drive is 380 ft. from surface, measured down the dip of the lode. We therefore desire for the present to continue these drives, but as we tell you at an outlay not exceeding our income from cultivation and from any gold obtained, we propose also once more to crush in bulk from selected places, yielding at least a small profit during the coming monsoon, when

our water power returns. But if we should find that this measure of our mining operations should seriously exceed our revenue from cultivation and from crushing then we should not hesitate to stop it altogether for the present, and should spend our money in mining on the Mysore side exclusively, and I feel pretty confident that this policy will be approved by all gentlemen present. Well, gentlemen, we have followed this plan, and this with fair success. We have continued both drivages into the interior of the mountains, and though we have certainly not come on anything like rich deposits, we have had results better than any we had before. Before the end of the year we shall have crushed 4500 tons of quartz, and shall have sold or realised about 3300*l.* worth of gold. And this sum, together with our sales of coffee and cinchona bark, will more than cover expenditure of every sort and kind in the Wynad, so that we are in fact exploring and developing the Agnew reef for no cost at all. The highest credit is here due to Mr. Lyon for the skill he has shown in himself conducting the mining and reduction operations single handed. The prospects of the next coffee crop are not very good; but our sales of cinchona bark will increase. We have now 210,000 cinchona trees varying from seven years to one year old, and this cultivation will be much extended. To turn now to our great hope and mainstay, the Colar property. Our operations there are being pushed forward with great vigour and determination. Those of you who have followed our reports sent to the newspapers will have seen that our agent, Mr. Lyon, and our mining superintendent, Captain Sheridan, have been cheered not only by the fact that we are the next door neighbours of Mysore and working on the same lode, but also by the appearance of the ground through which we ourselves are sinking and driving. We are sinking No. 3 shaft, which is now 127 ft. deep, and we are also exploring along levels driven from Nos. 4 and 5 shafts, following mainly ancient workings in view to seeing where best to conduct further sinking on these points, and some of you may have noticed that in the 75 ft. level from No. 4 shaft, stone with visible gold in small quantity has already been seen. (Cheers.) But, of course, the master point of the mine, the pivot on which the enterprise at present turns, is the sinking the main shaft. We want to get this shaft, which is 1½ ft. by 6 ft. within timbers, down to at least 250 ft. before we cross-cut to the Champion vein, which at that depth we hope to find rich and untouched by the ancient miners. All the best energies of ourselves, of Mr. Darlington, and of our staff on the spot are being directed to the rapid sinking of this shaft. At our last meeting I said this:—"But the essence of the board's policy is comprehended in this—not to fumble about in shallow workings, where we quite well know the ancient miners have been everywhere beforehand with us, but to get down our main shafts with all attainable speed to some 250 ft. below surface, at which point we get below all the possibilities of ancient mining, and where we hope by cross-cuts east and west to find our lodes rich and intact. To do this we shall use rock-boring machinery. Hand-drilling will not satisfy us. The rock is so hard that hand-drills would not get us down more than 1½ ft. a week. We have engine and air-compressor and drills of our own ready to our hands at Phoenix. We are sending them to Colar. You may ask me what rate we hope to sink at. Well, that depends on so many conditions varying as we sink, that neither Mr. Darlington nor the board would like to give any precise expected average. I will say this, however, that we shall be disappointed if we do not accomplish 25 ft. a month, or at least four times what could be done by hand-drills. Mr. Darlington has given most watchful attention to the details, and we this day embark a first-rate mechanical engineer and three shaftmen accustomed to this work." Well, that was in the middle of June, and by the 15th of October the rock-drills were already at work, all the machinery, engine, air compressor, drills, hose pipes, and all appliances having been successfully put up, after being brought from the Wynad or from home. Well, gentlemen, we earnestly hope and trust that our estimate of 25 ft. per month may at least be equalled by results obtained, and we have some sort of practical ground for hoping so, for I find from the detailed reports that the first 27 days of work have given us 21 ft. of sinking, and this was the first start before the completion of certain technical arrangements, with the details of which I need not weary you. I need not tell you that sinking such a large shaft 25 ft. a month through such hard rock is brilliant progress. It is more than four times what we could do by hand-drilling. The shaft is down now 100 ft., so that we hope and expect in six months' time to have it down the depth required, from which to drive the all-important cross-cut to the vein. (Hear, hear.) We have at this end a hard-working board, and we have in Mr. Darlington not only an eminent mining engineer, but a man whose watchfulness and mastery over every detail is unsurpassed. Speaking for the board, I wish to say that we feel that without Mr. Darlington we never could have made the rock-boring machinery the success it promises to be. We feel we cannot thank him enough. Then at the other end we have an indefatigable and able agent in Mr. Lyon; and Captain Sheridan and Mr. Bawden, and the other members of the staff, are all labouring in the interests of the company with the heartiest zeal and goodwill. Gentleman, nothing is, nothing can be, certain in mining. But we feel that this enterprise both deserves and has the prospect of success. We are on the same great lode as the Mysore, not to speak of branch lodes or parallel lodes. That is certain, not only from the run of the ground, but also from the ancient workings which riddle the surface. And not only are we on the run of the same champion lode, but we are close to where it is proved to be richly productive. It will be a very singular and a very unfortunate circumstance if a vein so exceedingly rich in the Mysore Company's sett turns out barren throughout ours. I fully hope and expect that we, too, shall have something of the good fortune of our neighbours when we get down to the depth where their riches began to be found. (Loud cheers.) I beg now formally to move the resolution which the meeting has before it.

General AGNEW seconded the motion.

Mr. WILLIAM ABBOTT said that as no other shareholder seemed disposed to address the meeting he might assume that their silence gave consent to the resolution which had been proposed. He had attended every meeting of this company since its formation, and he had attended some when his reception by the shareholders was the reverse of complimentary, but if he could form an opinion of the views of the shareholders to-day it was an agreeable contrast to that of any meeting which had preceded this. (Cheers.) The shareholders had been patient and long-suffering, and at times almost desponding, for the last four years, but for himself he never lost faith in the ultimate success of the property. He was very glad indeed that others connected with the company, particularly the directors, and especially the Chairman, had always maintained their faith, and had exhibited an amount of pluck and enterprise which was highly commendable. (Hear, hear.) He did not hesitate to say that if it had not been for the faith which the Chairman and directors maintained, and kept their heads, and ignored the feeling of despondency which was prevalent with regard to Indian gold mining, the shareholders would never have arrived at the prospect of results such as they had before them to-day. He spoke as a large shareholder, and he represented nearly half the capital of the company, and he was sure he represented their feeling when he commended the directors for their reticence regarding the property they proposed to sell, and the price they would sell it for. (Cheers.)

The confidence of the shareholders and the directors had been amply repaid, and they intended to trust the board again. If the Chairman would not consider it presumptuous on his part, he would make a suggestion which had occurred to him, and that was that the directors should not be in too great a hurry to fix a price for the one-fifth portion of the property which it was proposed to sell. (Cheers.) It was all very well for gentlemen to go into estimates as to what the shares of this company were selling at, and also what the Mysore shares were selling at; but what had struck him was that the largest shareholders in Mysore were showing their faith in the company by retaining their shares at the present price. He did not want any further mark of confidence in the future than that, and they might rest assured that, as their property adjoined that of the Mysore, so would the Mysore success be reflected upon the Indian Consolidated Company, and to

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# THE WENTWORTH GOLD MINING AND INDIAN ESTATES COMPANY (LIMITED).

The fifth ordinary general meeting of shareholders was held at the Cannon-street Hotel, yesterday.

Mr. HENRY WHEELER MAYNARD (the Chairman), presiding.  
Mr. A. N. FLEWELL (the secretary) read the notice calling the meeting, and the report and accounts were taken as read.

The CHAIRMAN said he appeared before them in a somewhat peculiar and not by any means a happy position. In the few remarks he was about to make he wished entirely to avoid personal feeling against anyone, and his remarks would be made with the most perfect good nature and good feeling. His peculiar position was this; he was informed, rightly or wrongly, that when the adoption of this report was moved and seconded it would not be carried by reason of the personal feeling to himself. He asked them to trace, for a moment the history of the company. They remembered who promoted the company. Through Messrs. Stanes, Watson, and Co. he joined the board, and he believed that a great deal of the capital was obtained through his name as Chairman. They sunk 11,000*l.* in mining, which came to nothing. Then they appointed Mr. Ryan their manager in India, and he held Mr. Ryan to be one in a thousand, who devoted himself day and night to the service of the company. After a time this company paid 2½ per cent.; whether it was paid rightly or wrongly was a question which might be open to some doubt. There came a time after that when the firm of Stanes, Watson, and Co. got into difficulties, and the grave question arose whether Mr. Stanes was still on the board, or whether he had committed a distinct act of bankruptcy. The matter was submitted to legal opinion, and the directors were informed that as the matter then stood Mr. Stanes had not done so. A little later on Mr. Rivers Hicks appeared on the scene. He was a young man, and was second to none in his knowledge of cinchona, and he always felt that Mr. Hicks' knowledge of cinchona was of great service to the company's position present and future. Mr. Hicks afterwards raised the question of Mr. Stone's position on the board. He referred to two letters which Mr. Hicks had written to him (the Chairman), intimating that he (the Chairman) had not done his duty. Then Mr. Hicks wrote a long letter to Mr. Ryan, and in that he made propositions for the strengthening of the company by calling up the capital. Mr. Hicks had a number of paid-up shares at the time that proposition was made, and he believed that since then Mr. Hicks had bought shares. He (the Chairman) held about 1200 or 1300 shares, and he had great faith in the company, and did not mean to sell a share. The letter of Mr. Hicks suggested that Mr. Ryan should give up his salary.

Mr. RIVERS HICKS: Not at once.  
The CHAIRMAN said he felt bound, in the interests of the company, to maintain the chair, not for the honour of the thing, for he was sorry he ever filled it; Mr. Hicks said he had sufficient strength to carry his point; and, if so, he (the Chairman) would bow to it. He had never asked for proxy, but Mr. Hicks had proxies for about 30,000, and certainly he was astonished to find that Mr. Hicks had obtained proxies. He understood there was to be an honourable understanding that there were to be no proxies. They had now arrived at the minimum of their expenses, and he had taken as much interest in the affairs of the company as anyone could possibly do, and he had not opposed Mr. Hicks' policy regarding the cultivation in any way; in fact, he had embraced it fully. He was sorry that Mr. Ewing had intimated his intention to resign his seat at the board, but Mr. Ewing said—"I will not be on any board where I am the least opposed." For his own part, he should like Mr. Ewing, who knew India well, would take the chair, and then the three directors could all work together for the good of the company. He would not say any more, but would move the adoption of the report and accounts.

Mr. RIVERS HICKS, in seconding the motion, admitted that the Chairman had spoken in a fair spirit. With regard to Mr. Stanes' retirement from the board, the Chairman seemed to think that he (Mr. Hicks) had acted in a hasty manner, but he denied that such was the case. As regarded the letter which he had written to Mr. Ryan, it was true he had advocated the calling up of more capital; but if all the letter had been read it would have conveyed a different impression. He suggested that Mr. Ryan should forego his salary; and he also made some other suggestions, which had been carried out. He said the effect of cutting down the expenses would be such that, in two years, the shareholders would have been able to see the effect of the money, and then there would be no difficulty in calling up the whole money, as they would see what had been done with a part. His idea was that they should not be called upon to pay up a shilling until they were making good progress. As to the proxies, he told the Chairman there was no necessity for sending out proxies; but afterwards he became aware that the compromise that the Chairman should mention the matter and that he (Mr. Hicks) should reply, would not satisfy those who supported him. He then gave notice to Mr. Ewing, who said:—"If there is any opposition to me I will not offer myself," and then Mr. Ewing announced his intention of not seeking re-election. As the Chairman had said, he had received proxies amounting to nearly 34,000*l.* He was not yet so conversant with the figures as he ought to be, as he had only occupied a seat at the board since September, and since there had been commenced and carried into effect the policy which would cause improvement in the company's estate. The shareholders were aware that Mr. Felix Browne had been sent out to inspect the company's estate, and confer with Mr. Ryan as to what was best to be done, but they could not expect the combined report for some months. The directors had omitted this year to give the usual report from Mr. Ryan because it was not advisable to scatter broadcast all the information contained therein. When the combined report of Mr. Ryan and Mr. Felix Browne was received, then information would be given to the shareholders as to whether the estimates of expenditure and income which had been made would be confirmed or otherwise by the experts on the spot. They would then see that the vigorous policy now pursued would result in permanent dividends, without any further call, commencing in 1888. Referring to the different articles of cultivation, they had it on good authority that if the increase of returns per pound per acre was confirmed of what had taken place on neighbouring estates, this company could plant tea with confidence. As regarded the coffee-planting, they must not betoo confident regarding that. The price of coffee was low. The average price during the last two years of coffee of this company's quality had been about 50*s.*, whilst the average price for the two years preceding was as high as 76*s.* But the price of the best coffee had lately improved. The manager advised them to abandon a large portion of the coffee cultivation. The directors did not despair of coffee cultivation, but they awaited with considerable interest the combined report. Having referred to the claim of Mr. Ryan to the crop under the coffee leases, which is at present *sub judice*, he went on to say that the gold mining was definitely abandoned in July, 1883, and the directors were not going to galvanise the corpse into the semblance of life. They started with 120,000*l.*, of which they paid 80,000*l.* for the estates, under the idea that they were going to find gold. They had spent 14,000*l.* in mining, but had never found gold in paying quantities, but they had never sunk a shaft to a great depth. Considered as a cultivated estate, 40,000*l.* would be a fair value for the property, and, with about 16,000*l.* uncalled, would represent 56,000*l.* so that their loss on gold mining might be considered about 56,000*l.* The directors might have advised writing this off, but this would have involved a call-up of the whole 4*s.* per share unpaid. It was proposed to eliminate from the title the word "gold," but this would not prevent them from going on with mining, if necessary. The question was how were they to pay a dividend on 104,000*l.*, when the capital was 44,000*l.* They could only attain their end by a continuance of patience and perseverance. They wished to expend 12,000*l.* on the estates during the next two years. Cinchona took a great many years to grow, and for some years the trees required tending at considerable expense. Having referred to the great growth of cinchona in other parts of the world, and having given some details with regard to the probable prospective yield from cinchona, he said that if the funds were used for the permanent improvement of the property, there would be no reason to regret the arrangement which it was suggested should be come to. The policy

was to expend during 1886 and 1887, 12,000*l.*, and during 1888, 6000*l.* more, and he hoped this would not only pay expense, but also a dividend at the end of 1888, and from that time to continue dividends. (Hear, hear.)

A SHAREHOLDER said he heartily concurred in all that Mr. Ryan had said.

Mr. TOLPUTT controverted some of the positions taken up by Mr. Hicks in regard to cinchona.

Colonel SWEET said the board asked for 12,000*l.* for two years. It was a very large sum, and he wished to know how they proposed to expend it. For what purpose was it wanted? There was no map of the estate, and as to the cultivation, he observed that there were 600,000 cinchona trees last year, and the same number this year.

Mr. HICKS: The trees have been carefully counted, and the failures have been 20 per cent.—a very small percentage indeed, for it is not unusual for one-half or three-fourths of the trees to die off.

Colonel SWEET said they were to have an extension of the trees, and he wanted to know what had been the result of that extension. Vacancies ought to be regularly filled up if the people out there were doing their work properly. He could not say that the report was satisfactory.

Mr. HICKS: We have taken the further precaution of sending out a gentleman, so that we shall have two heads instead of one on the spot. As to what the money is required for—4000*l.* is our present expenditure for up-keep, and 2000*l.* for extension.

Colonel SWEET thought the board would be wise not to extend, but to develop what they already had.

Mr. HICKS said the work of extension and development was going on simultaneously.

Mr. TOLPUTT pointed out that the expenditure in cinchona and the other products was in proportion to the acreage being cultivated.

Colonel SWEET asked what was the extent of what they were cultivating. He was a coffee planter himself for ten years. He wanted to see a map which would show the extensions that were going on.

Mr. WALTER JAMES condemned the policy of the board, and referred adversely to the Chairman.

Mr. GODDARD asked why Mr. Ryan's report had not been sent out. There was a great desire for gold mines at the present time, and had they definitely proved that there was no gold upon this estate? (Hear, hear.) It was inexpedient at the present time to alter the name of the company.

Mr. DAW said he took shares in this company because it was a gold mining company, and he certainly understood that the last call of 1*s.* would be the final one. Almost directly the company started it gave up its search for gold. He thought they had a claim upon the promoters. The present depression was largely caused by fraudulent Limited Liability Companies. He moved—"That the report be adopted with the exception of the paragraph relating to the call."

—Mr. HENRY THOMPSON seconded the amendment.

Mr. WILSON asked if Mr. Ryan were the vendor. (A Voice: Yes.) If so it would be desirable to have him present, and he suggested an adjournment pending his arrival.

A SHAREHOLDER asked for an explanation of the item in the accounts—"Sundry debtors, 2500*l.*"

The CHAIRMAN: I am not surprised at the remark made by Mr. Walter James, because I am accustomed to them. For the last five years he has had something to say against me at each meeting. (Hear, hear.) We did not attach Mr. Ryan's report to ours for the reason mentioned by Mr. Hicks, and because Mr. Ryan himself will be here in six months. The expenses are all detailed in the revenue account. It is the unanimous opinion of the directors that the call is necessary for the benefit of the company—and some of the directors are the largest shareholders. The brokers tell us that our cinchona is as good as any placed upon the market. I think the day will come when our company will be able to compete with any other in this respect. The policy of adjournment is undesirable, and would be detrimental to the interests of the company. The item of 2500*l.* sundry debts was simply a credit, but has since been realised in cash.

A SHAREHOLDER: Could you make the call in two instalments—6*d.* at a time?—The CHAIRMAN: It is rather an expensive way of doing things.

Mr. HICKS said a large amount of the money had already been spent.

The amendment was then put and negatived, the report being afterwards carried by a large majority.

The CHAIRMAN proposed, and Mr. STEVENSON seconded, the re-election of Mr. Rivers Hicks, which was carried unanimously.

The CHAIRMAN said they had to re-elect a director in the place of Mr. Ewing, who retired.

Mr. BLADON said that as no board of directors could work together unless united, it would be better for the Chairman to retire, and he advised him to do so. They wanted some one with an extensive knowledge of the products which the company proposed to place upon the market.

Mr. McDONALD said that, whilst the last speaker made a strong appeal to Mr. Maynard to retire, he had supported that appeal by most inadequate arguments. If the Chairman were asked to retire it was a slur upon him. This might not be the desire of the meeting, but it was the certain effect of such a result.

Mr. TOLPUTT endorsed the views of Mr. Bladon, and contended that Mr. McDonald had not done justice to that gentleman's arguments. There was evidence of disunion at the board, and also of want of experience, otherwise the company would not be in its present position.

The CHAIRMAN said that several remarks had been made as to disunion at the board, but where was the proof of it? It was of no use making statements which could not be supported by facts. He challenged Mr. Hicks to say that there was disunion at the board; he challenged anyone in the meeting to say so.

To this challenge there was no reply.

Mr. RAY deeply deplored the loss by death of Mr. Frewer, the late secretary. (Hear, hear.) He was sure all the shareholders greatly lamented his decease. (Hear, hear.) He hoped Mr. Ewing would allow himself to be re-elected.

Mr. JAMES wished to bear tribute to the memory of the late secretary. He was a painstaking and faithful servant of the company.

The CHAIRMAN acknowledged the courteous tone adopted by Mr. Bladon and Mr. Tolputt, but did not see why he should accede to their request. He would now propose the re-election of Mr. Ewing.

Mr. BLADON seconded the motion, which was carried unanimously.

Mr. EWING said his best endeavours would always be devoted to the welfare of the company.

Mr. TOD-HUNTER was asked to take a seat at the board, but declined whilst it was constituted as at present.

The auditors were re-elected.

## THE SPECIAL MEETING.

The meeting was then made extraordinary, for the purpose of eliminating the words "gold mining" from the company's registered title.

The CHAIRMAN moved—"That the name of the company be changed to the Wentworth Indian Estates Company (Limited)."

Mr. HICKS seconded the motion.

Mr. JAMES asked whether the alteration would be attended with much expense?—The CHAIRMAN said about 15*l.*

Mr. LABOUCHERE advised the shareholders to let the title of their company alone for the time.

An amendment was moved and carried—"That the title be not changed."

Mr. HICKS demanded a poll, but, on being appealed to by Mr. BLADON, withdrew.

The proceedings closed in the ordinary way.

APPLICATIONS for debentures in the New Potosi Company (Limited), have far exceeded amount for subscription. Letters of allotment and regret will be posted in due course.

## WEST SETON.

A 16-weekly meeting of shareholders was held on the mine on Thursday.—Mr. THOMAS PRYOR (the purser) presided.

The labour costs were 2645*l.* 13*s.* 6*d.*; the merchants' bills, 1611*l.* 7*s.* 6*d.*; and rates, 14*l.* 1*s.* 8*d.* These accounts made the debits 4271*l.* 2*s.* 8*d.* The tin sold, 64 tons 13½ cwt., realised, at an average price of 50*l.* 17*s.* 6*d.*, 3259*l.* 4*s.*; copper brought 1024*l.* 13*s.* 7*d.*; arsenic, 312*l.*; extra carriage, 12*l.* 18*s.* 6*d.*; iron, &c., 19*l.* 4*s.* 11*d.* This left a loss of 565*l.* 1*s.* 8*d.*

The CHAIRMAN: I may say, gentlemen, that these accounts are very satisfactory to the officials, and will be, I think, to you also, seeing that our credits are considerably more than at the last meeting. We have sold some 12½ tons of tin additional, and this means an extra credit of 650*l.* We have received from arsenic 120*l.* more than last time. And I think Captain Rutter will be able to explain directly that but for an unforeseen accident underground we should probably have had some 4 or 5 tons of tin more than we have returned. I was in hopes myself a month ago that we should have been enabled to produce to you to-day a clear statement that we should have been able to meet our current expenses. Our loss is considerably less than we have had for a long time. I hope, with our present prospects, to make a better statement next time.

The report of the agents (Captains Rutter and Samuel Bennetts) said:—Michell's engine-shaft, sinking under the 238, is down 5 fms. The lode in the bottom towards the eastern end of the shaft is 4 ft. wide, containing a little tin, but not sufficient to value. Since the last meeting we have fixed a new plunger-lift, reaching from the 238 to the 204. But for this and other urgently necessary work in connection with pumping the water the shaft would have been sunk deeper below the level. The lode in the 238, driving east of Michell's shaft, is 4 ft. wide, and worth 6*l.* per fathom. The 238, driving west of Michell's shaft, is worth for the width of the end—4½ ft.—15*l.* per fathom. There is a large piece of the lode standing to the south of the level. This we consider is of equal value to the end. This level is now extended 24 fms. west from the shaft, and the last 19 fms. have been through a lode worth from 45 to 60 lbs. of tin to 1 ton of stuff. This productive lode is apparently dipping eastward, and in which case it would be met with in the shaft in a few fathoms further sinking. The stope in the side and back of the 238, west of shaft, and about 5 fms. behind the present end, is worth for 9 ft. wide 25*l.* per fathom. The lode in the 226, driving east of Michell's shaft, is of a promising character, and is now worth 7*l.* per fathom. This level has opened up a good length of productive tinground, which is being worked chiefly on tribute. In the 226, driving west of Michell's shaft, the lode is improving, and is now worth 6*l.* per fathom. This end, which has been driven 55 fms. west, is now very near to the 40 fms. of productive ground passed through in the next level above. We are looking forward to good supplies of tin from this source shortly. No. 1 stope, in bottom of the 226 west of shaft, is worth 24*l.* per fathom. No. 2 stope is worth 15*l.* per fathom. In the 216 end, west of Michell's shaft on the north part, the lode is worth 10*l.* per fathom. In the 216 level, 65 fms. west of Michell's shaft, we have commenced to sink a winze. The lode is 10 ft. wide, and worth 20*l.* per fathom. The stope in the back of this level, about 90 fms. west from shaft, is worth 14*l.* per fathom. There are six pitches in work at tributaries, varying from 11*s.* to 13*s.* 4*d.* in 1*l.* Altogether our prospects are quite as good as at the last account, and we have reason to hope that our returns of tin will continue to increase.

Captain RUTTER: Four weeks ago we had a run in the back of the 226. The north side came down and covered one of our stopes for some days. But for this we should have had some 3 or 4 tons of tin more. This accident was quite unforeseen. We have a heavy piece of ground there for 30 fms.

The CHAIRMAN: The ground is secured now?—Captain RUTTER: Yes.

Mr. THOMAS HUTCHINSON: You think your returns will increase?

Captain RUTTER: According to present prospects I think they will. I do not like to promise, but I really believe they will increase.

Mr. HUTCHINSON: And but for this accident you think you really would have had more tin?—Captain RUTTER: Yes.

Mr. HUTCHINSON: Ten tons more will pay costs?—Captain RUTTER: Yes.

Mr. HUTCHINSON: I hope that very soon you will get to the right side.

Mr. J. H. BUDGE: Have you any source from which you can get additional tin?—Captain RUTTER: We have a piece of ground westward of the 216 40 fms. long. We have commenced a winze in it, and so soon as this is done we shall have there a good piece of ground to work upon. We have gone through 40 fathoms of it. The lode in the end is good, worth from 40 to 50 lbs of tin to the ton, and sometimes more. The lode above is not so good. We are looking forward to the next level, hoping it will be better.

Captain RUTTER, in reply to Mr. F. W. MICHELL, said the lode in the 216 end, going east, was very kindly and promising. That level was further east than many of the levels upward; they have a very promising piece of ground.

Mr. MICHELL: If you touch anything going back under the old mine it will be important?—Captain RUTTER: Yes; it will. We have some good ground there.

Mr. HUTCHINSON: You are not doing much exploring work?—Captain RUTTER replied that they were especially in sinking shaft, and driving the two bottom ends.

The CHAIRMAN: And sinking the shaft with a full pare of 12 men. So you see we have a good deal of dead work.

Capt. RUTTER: We are not stinting anything in the way of exploring.

On the motion of Mr. MICHELL and Mr. HUTCHINSON the accounts were passed.

Mr. FRANK HARVEY: Any prospect of anything from New Seton Mine?—Capt RUTTER: I do not see much there. We are look-eastward now. The 226 is going east, and a nice little lode in it. I think there is a fine prospect there.

The CHAIRMAN: You know we have been making calls continuously for a number of years. We have had several calls recently each of 10*s.* per share. It has been suggested by some shareholders that we have a little breathing time to-day, and make a call to-day to pay off our balance. That would be 5*s.* per share. At the next meeting we hope to be in a better position. Then we can take the matter in hand again.

Mr. BUDGE: What was the call last time?—The CHAIRMAN 10*s.* per share.

Mr. HARVEY (to the Chairman): You said a call to write off the balance. You mean the loss?—The CHAIRMAN: Yes; the balance is 4000*l.* The large shareholders would gladly square the book, but do not press it. I suggested to them that as we had been making calls for a long time we should have a call to clear off the current loss, as this would give satisfaction to many local shareholders as well as outsiders.

Mr. HUTCHINSON: It would take 30*s.* per share to clear the book?—The CHAIRMAN: Yes; we do not wish to do that.

Captain RUTTER: I think a call of 5*s.* per share will do.

Captain RUTTER, in replying to questions, said the average produce of the tin was 13½, and their present price for tin 51*l.* 12*s.* 6*d.* per ton.

A call of 5*s.* per 2400th share was accordingly made, and the business proceedings closed.

THE Van Mining Company's meeting, yesterday, passed off very satisfactorily. The trading operations of the year show a profit of 708*l.*, which is carried forward. It was stated that work has been vigorously and successfully carried on during the past twelve months, and the 150 fm. level has just reached the lode in the cross-cut. Blende has been found at the 140 in paying quantities, and discoveries of importance have been made at each level, from the 120 downwards, laying open extensive stopings, from which large returns may now soon be expected. A full report will appear in next week's *Mining Journal*.



## Mining Correspondence.

## BRITISH MINES.

**BEDFORD UNITED.**—H. Trezise, December 15: There is no change in the bargains to call for any remarks since last week's report. The stope and pitches maintain their value. Good progress is being made in driving the several levels, and the work of the mine is progressing satisfactorily throughout.

**CASHWELL.**—John Peart, December 12: The heading going west on copper has been about the same in width as last reported, not quite so much ore, and very hard to work; is worth 14 cwt. of lead ore per fathom. The drift going west in the above stratum is poor and very little vein; we have taken the men from this point, and have put them to take up stope from engine shaft foot to prove the soles, where we left good ore going down in driving the drift. The drift going east below scar limestone continues the same. A little vein in the roof with samples of ore, but so far nothing to pay. The heading in east end in slaty shale has been poor, but this week has improved a little, so that it is still 12 cwt. ore per fathom.

**COND-Y-FEDW AND PANTY-BUARTH LEAD.**—R. Prince, December 17: There is a slight falling off in the yield of the 30 fathom level west in the driving; the stope in this level remain much the same as when last reported. The tributaries at work below the 112 fathom level have been much hindered by water, but in spite of this they have been able to obtain a fair quantity of capital leadstone. We shall sell a small parcel of ore next week.

**CRAVEN MOOR.**—David Williams, December 17: In the main cross cut from Blackhill adit level the north and south lode is wider and easier to work, whilst the east and west branches are stronger, and carrying more congenial matrix, intermixed with larger cubes of lead ore as we approach the main lodes. Gill shaft is down 3 fms. below the 15 fms. level in a fine-looking lode, producing 30 cwt. of lead ore per fathom. A stope in back of 15 fms. level, east of shaft, worth 15 cwt. of lead ore per fathom. On Saturday next we shall weigh off a parcel of smelted lead. Surface and dressing operations proceeded with as fast as the weather will permit.

**CWM DWYFOR AND BRYNARIAN.**—O. Williams, December 17: Brynarian: We have started the driving of boundary adit level towards the old Brynarian workings, and have extended same 2 ft.; the present end is in very congenial matrix for producing lead ore, and is letting out water freely.

**DERESBY.**—J. Roberts, William Sandoe, December 16: Although the bottom of the sump on the hanging at No. 6 was drained of the water, yet on sinking deeper we found the water too quick to proceed, so we are now driving north from the sump, first to see how far the ore may extend, and secondly, to have an arch of the poor ground to stand in the bottom of the level to support the heavy hanging side. On this rich lode from the south end of the sump to the extreme north about 3½ fms., and as yet it maintains its full value as we have previously reported it. The stope at the new shaft is without any change to notice. Six of the men that were in these stopes are now in the sump. We do not think it advisable to increase the number of hands as we shall have some to spare from the Gorse shaft by the end of the month. We shall weigh off the lead and blende as soon as possible.

**DEVON GREAT CONSOLS.**—Isaac Richards, December 16: Wheel Maria: In the eastern shaft sinking below the 12, on the Capel Tor lode, the ground maintains its congenial character, and is favourable for exploration. In the 12, east of the eastern shaft, on the Capel Tor lode, the lode is 3 ft. wide, composed of capel, quartz, and peach, with small quantities of copper and munda ore. Wheel Emma, Railway Shaft, New South Lode: In the 220 west, on the south part of the lode, the drive is being continued by the side of the lode. Watson's: Fair progress is being made in sinking the engine shaft below the 124. No lode having been taken down during the past week, there is none at any of the points to work upon. The lode will, however, be taken down in the course of a few days, and its size and value will be given in the monthly report next week.

**DRAKEWALLS.**—Thomas Gregory, December 18: There is no change to notice in the engine shaft since my last report. The men are making fair progress throughout. North Lode: The winze sinking below the 50, west of cross cut, is producing good work for tin and wolfram, opening paying ground. In the 50 cross cut, north of the above-named lode, we have an increase of water, with some branches of capel, munda, and a little tin crossing the end.

**EAST BLUE HILLS.**—S. Bennett, W. K. Mitchell, December 16: The shaft is now at the deepest point about 10½ fms. below the 20, we propose to continue the sinking until the end of another week, and then open out on the lode for a level, where we expect to find a valuable piece of tin ground. In the 20 west end the lode is producing low quality tin stuff, but not to value. The east end at this level is looking more promising; both the lode and the surrounding rock are more compact and firm, and the general indications are those of a larger lode not far ahead. The value is from 35 to 40 per fathom. The stope above this level are worth, respectively 7½ and 10½ per fathom. In the 10 east end there is not much alteration to report during the past week.

**EAST CARADON.**—William George, John Kellow, December 17: The driving of the deep adit west from the north engine shaft is progressing at a very satisfactory rate, and every possible effort is being made to urge it on by nine men; the end has been driven during the past month 11 fms. 2 ft. 6 in. on the course of a well defined and most promising lode, which is composed of peach and munda, with good quality copper ore intermixed; the drive has been reset to the same men, and the month, at 4½ per fathom. We have to-day sold a small parcel of blende ore, computed 7 tons, at 5½, 5d. per ton, the produce of which is 12½ per cent.

**EAST WHEEL LOVELL.**—Thomas Quentrell, December 18: The lode in the eastern and western ends continues to look very well, and we have driven over a good piece of tin ground. The mine has recently improved and we are again beginning to make returns of tin.

**GAWTON.**—George Rowe, December 14: We have nothing new to advise you of since last report, and everything is progressing very satisfactorily both underground and on surface.

**GREEN HURTH.**—James Poljane, December 11: The stope in the back of the bottom level are about the same in value—25 tons per fathom. The 44 fms. level end north is worth 1 ton per fathom, a very promising vein. No. 1 stope in the back of the 44 fathom level is worth 1 ton per fathom. No. 2 stope in the back of the 44 fathom level is worth 3 tons per fathom. The 33 fathom level end north is worth ½ ton per fathom. No. 1 stope in the back of middle level is worth 1½ ton per fathom. No. 2 stope in the back of middle level is worth 2 tons per fathom. No. 3 stope in the back of middle level is worth 2½ per fm. No. 4 stope in the back of middle level is worth 1 ton per fathom. The adit level, north of new footway, is producing a little ore. Nothing new in any of the other bargains. Dressing suspended on account of the severe frost.

**GUNSLAKE.**—J. C. Secombe, C. W. Secombe, December 18: In the back of the 236 fathom level we have three stopes working of an average value of 3½ per fathom. A stope in the back of the 212 fathom level is worth 3½, 10s. per fathom. Three stopes in the back of the 200 fathom level are worth respectively 3½, per fathom. A stope in the bottom of this level is worth 5½ per fathom. The lode in the 188 east maintains its size and appearance, and is producing very good saving work for copper ore, but not enough to value. There are three stopes in the back of this level of the value of 3½, and 4½ per fathom. The lode in the stope in back of 175 fathom level east is worth 4½ per fathom. The lode in the stope in back of the 164 fathom level is worth 3½ per fathom. The lode in the stope in back of 152 fathom level west is worth 4½ per fathom. The lode in the 122 west is small and poor at present. The lode in the 116 fathom level east is 1½ ft. wide, producing good stones of yellow copper ore.

**HEALEYFIELD.**—John Trelease, December 11: Since my last report we have had a slight accident at the bottom of the pump, which has hindered sinking operations during the week. I have placed pumps in the shaft in the old stope to break some bouse ore. The tributaries bargain in the Smithy level have improved during the week. There is no change to notice in the north fore-end.

**HOLYWELL DISTRICT.**—December 17: The rib of ore in the forebreast of new lode is increasing rapidly; there is about 9 in. of solid lead, and the quantity to be derived from this point can be estimated at 35 cwt. per fm. No. 1 pitch, in the new lode, is turning out 30 cwt. per fm., an increase during the last few days. No. 2 pitch is about the same in value for lead as last reported, and the same amount of ore is being raised. The driving east out of No. 2 cross cut is of a more promising character, with an increase of ore as advance is attained. We shall be selling a parcel of lead next week, and will also be sending you a fuller report next week by Tuesday's post.

**LEAD HILLS.**—Arthur Waters, December 17: George's Roust Vein: Gripps' adit, going north of Muir's cross cut, is without ore to value, and the same remark applies to the drift above adit. Brown's Mine: The 115, south of Jeffrey's engine shaft, is driven 24 fms.; lode in end 4 to 5 ft. wide, worth 35 cwt. per fathom. No. 1 winze, in the 100 south, is down 9 fms. 4 ft., lode productive throughout, and worth, in present bottom, 2 tons per fathom. The 115 end will be up to the line of said winze in 5 fms. further driving. No. 2 winze south in 100 is down 2½ fms., lode 4 ft. wide, worth 2 tons per fathom. We shall in regular order start No. 3 and No. 4 winzes in said level, each on a good deposit of ore. There are four distinct runs of ore between Jeffrey's and Wilson's shaft, all of them dipping northwards, and spreading out in width and value below the 100 fms. level. The 100 is driven south of Wilson's shaft 68½ fms., lode in the forebreast 4 ft. wide, but at present without ore to value. The deposit of ore driven through here is about 40 fms. in length, worth on the average 35 cwt. along the roof, and 40 cwt. in the bottom of the level. No. 1 stope in 100, south of Wilson's, is worth 50 cwt. No. 2 stope 25 cwt. per fm. The stope in said level, north of shaft, is worth 40 cwt. per fm. No. 1 stope in 100, south of Jeffrey's, is worth 25 cwt. No. 2 stope, 40 cwt.; No. 3 stope, 40 cwt.; No. 4 stope, 50 cwt. per fathom. The 35 is now 75 fms. 1 ft. 4 in.; the lode is 6 ft. wide, yielding stones of ore, but not to value. No. 1 stope, in the 85, south of Wilson's, is worth 30 cwt. No. 2 stope 30 cwt. per fathom. The stope above the 70 is worth 50 cwt. per fathom, and the stope north of the shaft 20 cwt. per fathom. The rise in the 41, south of Wilson's, is worth 25 cwt. per fathom. The stope above the 10, north of No. 1 winze, is worth 20 cwt. per fathom. The stope south of ditto is worth 35 cwt. per fathom. The stope in the 10, south of No. 1 winze, is worth 30 cwt. per fathom. Gripps' adit, south of the said shaft, is in a lode 4 ft. wide, composed of quartz strings and slaty rock, but there is no ore to value. The stope above the adit, behind the end, is worth 30 cwt. per fathom. A pitch in Gripps' adit, south of Reid's shaft, by four men, at 90s. per ton, worth 25 cwt. per fathom.

**MELLSAR COPPER.**—John Gilbert, December 16: The lode in Gundry's engine shaft sinking below the 130 fathom level is 6 ft. wide, yielding some saving work for copper ore and blende. The men are making very good progress, and the shaft will be deep enough for the next level by the end of the year. The part of the lode carrying in the 130 fathom level, east of Gundry's shaft, is 5 ft. wide, and yielding 3 tons of copper ore per fathom, and some rich stones of tin, and presenting a very promising appearance. The lode here altogether is 8 ft. wide. In the 130 fathom level, west of shaft, the lode is 4 ft. wide, yielding ½ ton of copper ore per fathom, and is also worth 7½ per fathom for tin, and the ground is a little easier for driving. In the 110 fathom level, west of shaft, the lode is 6 ft. wide, yielding 2½ tons of copper ore per fathom, and good stones of lead and tin, and letting out a good deal of water. The other parts of the mine are yielding their usual quantities of copper ore. Our sampling for this month is 432 tons of ore, and we think the quality is a little better than usual.

**MID-DEVON COPPER.**—James Niell, December 12: A Shaft: The 98 cross cut south extended by nine men with boring machine 5 ft. 6 in., making total distance from shaft 11 fathoms 3 ft. 6 in. We are not yet through the hard bar or run of capel referred to last week, and have no doubt its influence has caused

the underside of lode to recede towards the vertical which lessens the cross cut. There is much water flowing from bottom of cross-cut this morning indicating its approach to more open and porous rock. I am daily expecting to cut lode. O Shaft: The stope in back of crosscut north from 50 east worked by three men, yields at present 2½ tons of ore per cubic fathom; the composition of strata would indicate an improvement.

**NEW CARADON.**—N. Richards, December 18: No. 1 lode at the 60 fathom level is 2 ft. wide, producing a little ore, but not sufficient to value. The cross cut north at the 50 fathom level is being urged on as fast as the nature of the ground will admit.

**NEW KITT.**—William Vivian, December 17: We are pushing on the 20 and 40 fms. levels east of Thomas' shaft. Lode without change to notice since last report.

**NEW LANGFORD.**—E. Dunstan, December 16: The shaftmen have been for the last few days securing the adit level which broke down for about 4 fms. in length. This is now completed, and the same men have commenced to clear the footway shaft below the 10. The lode in the tribute pitch in back of the 10, east of footway shaft, is still 2 ft. wide; the leader part is 6 in. wide, and is still yielding good work for silver ore, and lengthening as they go up; a very promising lode. No alteration to notice in any other part of the mine.

**NEW TERRAS.**—Richard Eade, December 17: The contractors are getting on very satisfactorily with the work of sinking the engine shaft. They appear to be working with a determination to get the matter out of hand as rapidly as possible. Carpenters are also busy about the woodwork of the pumping gear. Other portions of the work on surface are being pushed forward as much as possible.

**NEW TRUMPET CONSOLS.**—Thomas Quentrell, December 17: The men are making good progress in sinking Trenethick shaft below the 40 fms. level, and the lode is looking very well. In the winze sinking below the 40 west the lode contains copper and tin throughout, and has a very promising appearance. Our prospects are improving as we open up the mine, and we shall now be making returns of tin.

**NEW WEST CARADON.**—N. Richards, December 16: The new lode in the winze sinking below the 33 will yield from 1 to 1½ ton of copper ore per fathom. This lode at this level driving west is 2 ft. wide, but the ore part is split in branches, but there is at present every appearance of their shortly again uniting, and the lode is now yielding saving work for copper. No. 5 lode west at this level is 2 ft. wide, producing pretty much floor-spar, munda, and a little copper ore—a kindly-looking lode.

**NORTH GREEN HURTH.**—James Poljane, December 11: There is no particular change in either of the ends this week.

**PENEGAREG.**—Joseph Evans, December 16: During the last week every effort has been made to force on the work and get materials ready for the engine shaft. We have put four men to stope in the bottom of No. 1 south, and am pleased to say that the lead is improving as we go down. We have put two men to drive south on the flookan lode, and we have got a fine vein of lead ore in it. The vein altogether is looking kindly and very promising. We have put a pair to clear the 10 fms. level in order to make room for stoping; a bulk of ore ground is standing there. We are daily expecting the materials to arrive, so that we can commence upon the engine shaft. The dressing is going on regularly; the weather is favourable for it at present.

**POLCREBO.**—W. H. Martin, John Richards, December 16: To-day we have taken several samples from the points in operation, and we are pleased to report that some of them are very satisfactory. Next week we shall send you our usual monthly report.

**PRINCE OF WALES SLATE QUARRY.**—Manager, December 9: We have cleared out all the rubbish on No. 4 floor, and have had several very good slate blocks. I have let on contract in preparation for letting slate making bargains. The work on No. 6 is progressing satisfactorily.

**PRINCE OF WALES.**—S. Roberts, December 15: Watson's engine shaft is sunk 3 fms. below the 115 fathom level, and yesterday I put the men to prepare for the work of arranging and fixing the pitwork. In the 115 fathom level, east of the main lode, we have seen it before since we commenced this drive. It is 8 ft., all of which produces tin, but not sufficient to value. In the 115 fms. level, east on the new lode, we have no change to report, as we have been driving by its side during the past week. The 115 fathom level, west on this lode, is much the same as for some weeks past. The lode in the 102 fathom level east is 4 ft. wide, and of a very promising nature, and worth 7½ per fathom for tin. We are preparing a parcel of copper ore for the next sampling.

**PRINCE ROYAL.**—L. Bennett, December 16: The ground in No. 1 adit cross cut north continues much the same as last reported; somewhat stiff, and is set to drive at 5½ per fm. In No. 2 adit west on the lode is 3 ft. wide, carrying a soft leader of good tin stuff 6 in. wide on the footwall. The remaining part of the lode contains a small proportion of tin mixed with munda, blende, and copper ore. Altogether the lode looks well at that depth. This end is being driven at 3½, 10s. per fm.

**PLUSEYS.**—Thomas Trelease, December 17: During the last fortnight we have driven across the lode obliquely from the main cross cut in a northerly direction, near 5 fms., and have broken good saving work in some parts of it. It is better lode than we have seen it before since we commenced this drive. I should think we shall soon get the hanging wall of the lode in this end, the south end has been driven near 4 fms. since my last report, the capel and quartz here has been very much wider than we anticipated. We have now a change in the end it now being composed of flookan and quartz, and is letting out more water and from the indications I should judge we shall get an improvement here. Our water has fallen off fully one third since the heavy rains ceased, which proves the great increase of water mentioned in my last report was principally from surface water, which will have to be taken up by putting drains across the lode from the river below. The weather is very much milder than it was last week, and we have commenced our dressing operations again this week.

**ROMAN GRAVELS.**—Arthur Waters and Sons, December 17: We have been underground through the various points in the mine again, and beg to state that there is no change in the ends or stopes since our report of the 10 inst. We shall sample next week.

**SHEPHERDS UNITED.**—W. Argall, T. Job, December 12: Mounts Bay Section: There is no alteration to report in the driving of the 20, east of Penegaregick shaft; the lode is still 3½ to 4½ per fathom. We are looking forward to an improvement in this level when we reach the junction of the granite and killas, which cannot be very far off. The tribute pitches are just as last reported. We have commenced to dress for another parcel of tin.

**SHEPHERDS UNITED.**—J. Priok, W. Edwards, December 14: Tresavean Section—Engine Shaft: The shaftmen are still engaged in clearing and securing the 168 fathom level west towards the old east and man engine shaft, and fixing a traversing road. This level will be an important one, as all the water from the western part of the mine will have to be brought back to the engine shaft through it in order to prevent it from going to the lower levels, and the water below this point will be drained much quicker. For your guidance we beg to state that the level in question is not in any way collapsed, and the securing is being proceeding with rapidity as we find a great portion of it in good condition. Cunnack's Shaft: The lode in the rise in the 24 is improved, and is worth 15½ per fathom, and looking splendid, especially eastward, where we consider the lode will be 6 ft. and much richer, the dip of the rich ore being in that direction. Every effort is being made to effect a communication with the winze as soon as possible after which the mine will be in an excellent position. The repairs to the stack and engine house are completed, and the boiler house roof is being repaired as fast as possible. The 99 in. engine and all other machinery is in good condition and working well.

**SOUTH CONDURROW.**—William Rich, W. Williams, H. King, December 18: The 34 end, west of Marshall's shaft, carries a little tin and copper. The lode in the 66 end west is letting out water freely, and yields low quality tinstone. The 93 end west is without tin to value. The lode in the back of the 93, east of King's, is worth 10½ per fathom. The 93 end east has an improved appearance; the lode is 18 in. wide, and carries a little tin. The stope in the back of the 93, east of King's, is worth 10½ per fathom. The 10, west of Plantation, is worth 7½ per fathom. The 70 end, east of King's, is worth 10½ per fathom. The stope in the back is worth 9½ per fathom. The 60 end east is worth 8½ per fathom. The stope in the back is worth 10½ per fathom. The 50 end east is worth 9½ per fathom. Two stopes in the back are worth 10½ per fathom each. The lode in the 40 end east carries stones of tin. The stope in the back is worth 12½ per fathom.

**SOUTH DAREN.**—John Mitchell, Dec. 17: There is not much change in the 142 end west; it is now driven fully 8 fms. from the shaft. The 130 winze west is worth 18 in. of silver-lead ore per fm. There is not any change in the stope to call for remark. A full setting next week will benefit you next week.

**STANDARD LEAD.**—W. H. Borsie, December 17: The lode in the 45, south of new shaft, is not looking so well as it was last week; worth at present 1 ton of lead and blende per fathom. I think the falling off will be only temporary, and that we shall have a good lode again shortly. The rise in the back of this level is looking well, producing fully 3 tons of lead and blende per fathom. We are meeting with a quantity of water in this rise, but unfortunately it does not affect the water in the winze as yet. I am pushing forward as fast as possible the work in the shaft, and I hope to resume sinking early in the New Year. Surface operations were retarded last week with the frost for several days, but we are now in full work raising stone, taking out foundations, and other necessary work for the new crusher house, &c., and I hope to start the masons next week; but through a strike at the lime quarries our lime supply is at present very small.

**TOLGULOW UNITED.**—George E. Fremayne, December 17: The lode in the 80 driving west of Trelease's shaft is 7 ft. wide; a very fine-looking lode, producing rich arsenical munda, and good work for tin, with an increase of water; its present value is 14½ per fathom, with every indication of a further improvement. A stope in the back of this level is worth for tin and arsenical munda 15½ per fathom. Two stopes in the bottom of the 65 fathom level, west of Trelease's shaft. No. 1, west of ladder winze, is worth for tin and arsenical munda 20½ per fathom. No. 2, east of winze, is worth 12½ per fathom. The rise in the back of this level, west of Paul's shaft, continues hard and spare for rising. The part of the lode at present carried is 5 ft. wide, producing tinny work, with part of the lode still standing to the north. This rise is being forced with all possible speed to effect a communication with the 50 fathom level, east of Broad's shaft. In the deep adit level driving west of Broad's shaft the lode has been disordered by the intersection of a small cross course, but is again getting more settled, and producing good saving work for tin. This end will soon get under the long run of good tin ground driven through in the level above. The lode in the mid-adit level driving west of Broad's shaft is 3½ ft. wide, and worth for tin 17½ per fathom, and looking very promising for further improvement. Three stopes in the back of this level are worth 10½, 12½, and 20½ per fathom respectively. The lode in the shallow adit level driving west of Broad's shaft is 1½ ft. wide, and worth for tin 8½ per fathom. We are daily expecting to communicate this level with the rise from the back of the mid-adit level, when good ventilation will be given in this part of this mine. All the machinery and pitwork are in good working order, and working well. The 70 in. engine is keeping the water easily at five strokes per minute.

**TREGURTHA DOWNS.**—William Derry, Henry Prin, December 17: Since our last report we have reached the back of the 4 fathom level, but through the bursting away of a large quantity of water, which had been temporarily dammed back in the old workings on the north lode, it rose again in the shaft on Tuesday night, and I hope to resume sinking early in the New Year. A lift to aid the 20 in. plunger we have again recovered this loss, and hope by Saturday night to have the 40 in. fork. The working below this being of small extent will soon be unwatered.

**WEARDALE.**—James Blenkinson, December 12: Killhope, Engine Sump: We are down 6 fms. into Quarry hazel, and have struck grey beds with ground easier to work, 5 ft. sunk last week. We hope soon to open up a profitable mine here.—Tribute Pitches: Flat east of engine sump (in great limestone) is looking

well, worth 40 cwt. per fathom; the remainder of stopes in flats are valued as follows:—three stopes 16, one 18, and one 20 cwt. per fathom. Burtree Pasture: The Nattrass Gill end is a little easier to drive, vein 2½ ft. wide, composed chiefly of fluor spar, worth for ore 19 cwt. per fathom. The tribute pitches are without change, worth from 16 to 18 cwt. of ore per fathom. We have been carting the house ore from Burtree to Burtree Pasture this week to dress.—Groverake: The operations at this mine have been making steady progress, with encouraging results. The different ends maintain about the same value as last reported.—Greenlaw: Under the Quarry level we sunk 8 ft. last week in pit. We may reach the Tyne bottom limestone any day in this sinking. The tribute pitches have not much change, if anything they are a shade better than last week. We purpose at the end of this month rising from Lowe's to Watson's drift, where we expect to lay open some good stopping ground.

**WEST CARADON.**—N. Richards, December 16: No. 5 lode in the back of the 38 fathom level east is 2½ ft. wide, and is about the same as when reported on last week, yielding close upon 1 ton of copper ore per fathom.

**WHEAL AGAR.**—W. T. White, R. Daniel, W. Parkin, December 17: Setting Report: On Saturday last the following bargains were set: The engine shaft is down about 9 fms. below the 235 fathom level, and considering the quantity of wet we have had, good speed has been made in sinking. We hope in another two months to be driving the 245 east. We have lode in bottom of the shaft, which we consider to be a continuation of what we passed through in the 235 east. A sample from the shaft showed a good edge of tin. Sump winze to sink in bottom 235 east, at 16½ per fathom; winze down 5 fms., shall communicate this with the 245 from shaft as soon as possible. The 235 east end is within 3 fms. of No. 2 winze (in bottom of 225), which is 35 fms. east of engine shaft. Marks have been struck by dial for the machine men to drive direct to the winze, to effect a communication as early as possible. Good stones of tin are occasionally produced from this end, but we do not expect anything regular in the end until we hole to the winze, as we are evidently in the branches between the two main parts of the lode. Our object is to hole to the winze as soon as possible, when stopping ground will be made available below the 225, and good ventilation given to the 235, this will then enable us to carry on our workings more advantageously. The 225 end to drive east, at 8½ per fathom, lode worth 10½ per fathom. We have been obliged to temporarily suspend the sinking of No. 3 winze east in bottom 225 on account of this water; the lode in bottom of this winze is worth 6½ per fathom. The 215 end to drive east, at 18½ per fm., lode worth 12½ per fathom. The 205 end to drive east, at 12½ per fathom, lode producing stamping work for tin. Rise in back of 130 fms. level east, at 6½ per fathom, lode worth 8½ per fathom.—South Lode: The 215 fathom level to drive west, at 15½ per fathom, lode worth 12½ per fathom. Rise in back of 215 fms. level west, at 6½ per fathom, lode worth 10½ per fathom. The 205 fms. level to drive west, at 15½ per fathom, lode worth 15 per fathom. Winze to sink in bottom of 205 fms. level, at 7½, 10s. per fathom, lode worth 10½ per fathom. This winze is directly over the rise in back of 215, and when communicated will lay open a section of good tin ground; 12 stopes were also set at an average price of 5s. 11d. per ton of tin stuff, lode worth in each on an average about 14½ per fathom.—New Shaft: The contractor having communicated the cross cut from shaft to the level at the 225, he is now engaged in squaring the shaft down, and cutting shaft pits at the various levels as per contract.

**WHEAL CREBOR.**—Henry Phillips, P. D. Holman, December 15: The lode in the 159 driving west of new shaft is improving, yielding 2 tons of copper ore and a ton of munda per fathom. The lode in the 144 driving west of new shaft contains a little munda and ore, but not to value. The lode in the end driving west of winze sunk in the bottom of the 48, will yield 2 tons of copper ore and 3 tons of munda per fathom. Our stopping ground continues to yield in the aggregate 56 tons of copper ore and 20 tons of munda per fathom. All other points are without change.

**WHEAL METAL AND FLOW.**—William Argall, S. P. Curtis, December 16: Owing to the heavy floods our adit, which receives three tributaries from the long runs of adit levels, in which the water has been so long, the level was directed, to prove the main lode to the hanging wall—it will be remembered that it was 18 ft. in width where intersected in main cross cut—and to test No. 1 lode, which has only been seen at one point in the 31, some 20 fathoms further south. It is to be hoped that it has improved in this distance. The 34 south was driven 8½ metres. The lode being carried is about 3 ft. wide, including a leader 10 to 12 in. wide, yielding good dressing work consisting of yellow and grey copper ore.

The 34 mid level, south of Hall's rise, was driven 6½ metres on a lode carrying a small 6 to 3 in. leader of saving work. The same level north of the rise was extended 7½ metres on a fine-looking lode, the ore part being 3 ft. wide, and valued at 1½ ton per fathom. In this level the lode underlies westerly, contrary to its usual dip, and in the present end its angle with the horizon is 50°, whereas in the rise it is nearly 90°, or vertical. It is noteworthy that hitherto the most productive portions of the lode are where these abnormal underlies occur. No. 1 winze, in the 24, at old main shaft, was completed to the 34, and communicated therewith as above mentioned last month. The ventilation of the 34 north is now excellent. A convenient footway has been fixed and a valuable section of ore ground is available.

The upper mid-level south above the 24 was driven 6½ metres, opening low quality stopping ground. Nos. 1, 5, 6, and 7 stopes were worked during the month, yielding from ½ ton to 1 ton per fathom. Dressing was a good deal hindered by the rain in the latter half of this month, and the native custom of working only from sunrise to sunset makes the effective working day very short at this season of the year. The raisings for the month were 10 tons of over 40 per cent. copper ore. We forwarded to Lisbon on the 21st ult. for shipment 40 swansons 40 tons of ore, giving an assay produce of 24½ per cent. We expect to forward another small parcel of say, 15 tons, by the end of the present month.

**CHONTALES.**—Manager, November 5: The main upper level at San Antonio progressed 11 varas during the past month; the lode at present is only a few inches in width, and has a great underlie north. The north wall consists of hard blue rock, which at times we are obliged to blast, but in the last few days I notice that it dips towards the end, which gives hope of soon getting through it. In the western rise we rose 7½ varas, and have already met with old work. No. 2 level end has been driven 3 varas; the lode at present is hard and about 1 ft. wide. The rise has been communicated with No. 1 level. We have commenced another rise, which progressed 10½ varas; lode 3 ft. wide, and produces some good quartz. Fifty varas was also stope in the past month. The mill crushed in the past month 750 tons of quartz, which produced 7½ oz. of gold, or yielding on an average 2 dwts. per ton. The gold is valued at 208½, the cost for October is 321½, 12s., leaving a loss of 113½ 12s.

**DEVALA-MOYAR GOLD.**—J. Williams, November 21: Tramway: This work is progressing favourably, and I am in about 10 days to excavating ground, laying sleepers and rails will be completed. We are busily engaged in collecting materials for the short passes, which have been seen at Salomon's Hill, and, although a considerable distance off, we have but little trouble in getting them to the spot where required by means of the tramway.—Harewood: We have still a loose cavity in the centre of the Harewood shaft, and although some rain has fallen of late and found its way into the workings it has not impeded the progress, water readily finds its way through to the tunnel. I consider this a good indication. The lode so far as seen is composed of honey-combed quartz, and is working quite distinctly from the level below. Salomon's: The lode in the 600 ft. tunnel is producing more quartz in the forebreast. The further this level is extended the more promising it gets, but the quartz is not quite good enough as yet to send to the reduction works. Both the 500 and 400 ft. tunnels are still very hard for driving, but I am pleased to see the lode in each tunnel keeping up to the size of 5 ft. wide. In the 400, by means of the communication just effected, the ventilation is now really good, and I think the progress in future will be much better than for some time past. The 3 ft. tunnel driving on the cross branch is now composed of several small branches, with hard green sand standing between each, about 8 in. thick. Samples taken from any of these will produce free gold. The winze sinking below the 300 has not altered in appearance since last week. A windlass has been erected, and is much more convenient for working. A new winze has been started in the bottom of the 400, in a lode 5 ft. wide, to ventilate the 500 tunnel. I would remark that these winzes are opening up ground for stopeing. We have a few men working at the mill levelling ground for stacking wood, &c.

**INDIAN CONSOLIDATED GOLD.**—Mr. Lyon, October 31: No. 1 Level, North Drive: Distance driven during month of October 10 ft., making total length driven from cross cut 285 ft.—No. 2 Level, North Drive: Distance driven during month of October 19 ft., making total length driven from cross cut 529 ft.

—November 15: Work at Colar: The directors will be glad to hear that the rate of progress in main shaft is even now materially improving, and Captain Sheridan says they will have sunk 6 ft. for this week, and the men are working very hard.

—November 22: Campaign No. 13: I am now able to send you the report of the 13th Campaign being a crushing of 840 tons from upper stopes, with a yield of 163 oz. 13 dwts., or virtually 4 dwts. per ton. The value of this gold will be upwards of Rs. 7000, and the cost of winning it has been under Rs. 3000. I have restarted on the same stuff, and shall continue until the end of the year. We shall have to use steam, as water supply is rapidly failing, there having been no rain of consequence for weeks. I am going to the battery in the morning to start the engine, hence my reason for writing to you to-day.

—November 23: The tramway tunnel and upper drive south from rise were connected on Saturday evening. All now good throughout stopes. Started engine this morning, and will crush 1000 tons by Christmas.



125 ft. from surface; the country is very hard. In the north end of our shaft we have a lot of quartz leaders, but I cannot get a prospect of gold in them. We ought to meet with the run of quartz that was passed through in the cross cut at 85 ft. from surface in about 8 or 10 ft. depth. As soon as we meet that I should advise driving north and south on it.—No. 4 Shaft: The drive south at this shaft has been extended 13 ft. 6 in., making a total of 70 ft. from shaft. We have got a nice looking leader about 4 in. wide, carrying a little gold. We will have to drive about 50 or 60 ft. further to get into the old workings.—No. 5 Shaft: I have not been able to get any coals to start this shaft, but I have let it on contract.—Machinery: All the machinery is working well.

G. J. Bawden, November 20: The machinery at No. 3 shaft now works well, and keeps the water drained.—No. 5 Shaft: We have erected gear at this shaft for pumping with bullcock power, and I think one bullcock will keep the water with ease in each shaft.—Main Shaft: In the main shaft during the fortnight we have sunk 11 ft.—Darlington Rock-Drills: These machines continue to work very satisfactorily, and are far preferable to the McKean drill for our work here.

JAVALL—G. E. Chambers, November 6: I beg to hand you the following report for the working for October—Mine: Esperanza tunnel was driven 1½ vara; the lode is still extremely poor and hard, and with the additional difficulty of being very wet. Dolores slope was driven ¾ vara to east. In Ultimo slope 10½ varas were driven on the south side, by which I shall extract the remaining small pillars. Firm's tunnel was driven 1½ vara. The level from San Pablo's shaft was driven 15 varas to north. The shaft in the south level was completed, and quartz is now being extracted from the north lode. A tram is completed to a very good bunch of manto upon the north side of Socorro. The quartz supply came from the following pieces of working:—Seaman's slope yielded 200 tons; south level yielded 192 tons; west sinking yielded 280 tons; east sinking yielded 1 ton; Luken slope yielded 69 tons; San Pedro No. 2 yielded 132 tons; Nispero No. 1 yielded 216 tons; Dolores yielded 258 tons; Esperanza yielded 135 tons; Concepcion (Manto) yielded 254 tons. I was compelled to discontinue taking quartz from the piece of Esperanza lode mentioned in my last, it having become too poor. It is with pleasure that I am able to report to you an improvement. In the general average of the quartz of about 25 per cent., or 1 dw. per ton.—Mills: La Fé: All through the month the weather was most extraordinarily dry, so much so as to greatly reduce our water power; and only up to the 11th were we able to work 30 stamps, from thence to the 24th 20, and from the 24th to the 31st 15 stamps. Upon an average 22 stamps worked 20½ days, crushing 1328 tons, which yielded 30½ ozs. of gold, showing an average of 4 dwts. 13½ grs. per ton.—Esperanza: We had a stoppage of a few days to put on a new bevel wheel and pinion. The 12 stamps worked 20 days, and crushed 471 tons, yielding 94½ ozs. of gold, an average of 4 dwts. per ton.—Caridad: The two cups worked 23 days, and produced 27½ ozs. of gold.

Total remittance consists of 425 ozs. This, considering the work done, I think a most satisfactory result, and until the water fell off I had very great hopes of sending you a large remittance. There seems to be a change in the weather, which promises rain, and unless persecuted by some other misfortune, by the present quality of quartz, these hopes may still be maintained for this month. Of course, while our standing power is reduced I am choosing as much as possible the best places of working, and endeavouring to keep the expenses down to the minimum.—Receipts and Expenditure: The expenditure during October was 884. The remittance is valued at 1062.

MYSOKE GOLD.—R. D. Plummer, November 24: Mining Operations: In the 296, north of Taylor's shaft, the lode is the full width of the end, we can see 7 ft., and there is yet a portion standing on the east side; the assay value this week, from samples taken underground, is much lower than it was last week, being 3 ozs. 2 dwts. 1 gr. In the 236, south of Taylor's shaft, the lode is improving in width, it is now 4 ft. wide, giving an assay of 2 ozs. 13 dwts. 21 grs. per ton of ore. In the 236, south of Taylor's shaft, winze in the bottom of the level, the lode is strong and healthy in appearance, 6 ft. wide, assaying 3 ozs. 6 dwts. 23 grs. In the slope in the back of the 236, south of Taylor's shaft, the lode has improved in width, being now 5 ft. wide, assaying 5 ozs. 12 dwts. 17 grs. per ton of rock. The 236, north of Taylor's shaft, continuation of No. 1 winze for drawing shaft, carries a fine strong lode 6 ft. wide worth 4 ozs. 1 dw. 16 grs. per ton; 13 ballons are working under the 226 ft. level, north of Taylor's shaft, they lie on a sink and slope 56 ft. long showing an average width of 6 ft., giving an assay value of 5 ozs. 9 dwts. 14 grs. per ton. In the 173, south of Taylor's shaft, driving on the west lode, the lode is standing intact in the back of the level, and so far 3 ft. below the back; below this the old men have taken away the best part of the lode for a width of 2 ft. 6 in., leaving quartz on the west side 2 ft. thick, this mixed together gave an assay of 19 dwts. 14 grs. In the 236, north of Taylor's shaft and cross cut from west to east lode, the rock is hard, and small progress is made. In the 173, north of Taylor's shaft, on the east lode, No. 4 winze, the lode is very wide, but the assay value is not quite so good. It is now 6 ft. wide, assaying 16 dwts. 8 grs. In the 173, west of Taylor's shaft, a company of coolies are still employed making a road for the new drawing engine.—Plummer Shaft: During the past eight or 10 days the lode has suddenly bent itself to the west, and now has a very much greater underlie than it had in the first 150 ft. The lode is 3 ft. wide, comparatively poor quartz, assaying 8 dwts. 4 grs.

NEW EMMA SILVER.—Mr. Collins Nov. 23: In consequence of my absence from the mine on account of snowstorm was unable to get here until middle of this week. No letter was written on the 21st inst., so that my last letter is under date of the 14th inst., since which progress has been for the week ending the 21st inst. East level advanced 17 ft., and for the week ending to-day 18 ft., making the total distance from cross-cut 444 ft. I regret that there has been no change for the better since my letter of the 14th inst.; appearances continue about the same. Because of scarcity of men nothing has been done in cross cut from east level. The present snowstorms have caused all the families to move to the valley until spring, and many of the employees in the Emma had their families here, so was obliged to allow them a few days off, in order to move them out of the canyon.

NEW HOOVER HILL.—November: Driving north of the Brilo's shaft at 290 ft. an advance of 14 ft. has been made. The ore in the end is at low grade, but has a favourable appearance. The winze below the 230 north end 50 ft., an advance of 7 ft.; the ore in the bottom continues low grade. The ore broken in the slope below the 170 north during the month, has averaged about 89 per ton.—Hawkins: The drift from the bottom of the winze going down on the No. 1 orebody is 7 ft., and the ore in the end is worth about \$1 per ton. We are now following some streaks of ore worth from \$8 to \$10 per ton, going off to a northerly direction. The orebody having been disturbed by the cross course of greenstone, we wish to get on the main body before sinking the winze deeper. In the No. 2 slope the ore broken during the month has been worth from \$10 to \$12 per ton. The ground in the back having been well secured, and a small steam pump having been put in the bottom of the incline to keep the water, we are now sinking through the greenstone. The prospecting drift north of the Hawkins shaft at 135 ft. is 62 ft. an advance of 46 ft. We continue to encounter low grade ore. The other prospecting work done during the month consists of 23½ ft. driven north of the open cut shaft at 40 ft.; 20 ft. driven west of the No. 1 slope, and 10 ft. driven south of the Provost shaft at 80 ft. At all of these places we are getting a little low grade ore.—Mill: 20 stamps in 24½ days crushed 717 tons of ore, yielding 346½ ozs. of gold. I ship you to day per express through Messrs. Brown Brothers and Co., bar No. 34, weight 346½ ozs., insured value, \$850.

NEW CHILE GOLD.—Richard Pearce, November 15: Conicero Mine: No. 4 Shaft: The shaft is down 33 ft. below No. 11 level. The lode in the bottom continues to be about 3 ft. wide of average quality. No. 7 west drift is in 31 ft. from shaft; lode in the end also continues to be 3 ft. wide, but quality not as good as when last reported. We had to rise 20 ft. to hole into the Potosi workings, and I am pleased to assure you that we are not disappointed in the result of this communication. No. 8 west drift is in 398 ft. from shaft; lode in the end 5 ft. 6 in. wide, rock of low grade. The winze in the bottom of this drift 323 ft. from shaft, is down 20 ft.; lode in the bottom 1 ft. 8 in. wide, quartz of good appearance. This winze will be a pillar 4 ft. in length and 32 ft. in depth. This pillar will be of no value for milling. No. 9 west drift is in 493 ft. from shaft; lode in the end 4 ft. 6 in. wide, quartz of good quality, which has improved since last report. No. 9 west slope, in the back of this drift, is 277 ft. from shaft; lode of good milling quality for 60 ft. upwards from the bottom of this slope. No. 10 west drift and the 10 west slope, in the back of this drift, being blocked up with broken quartz, I could not take any measurements to-day. Having inspected these ends two days ago, I am able to inform you that they are in good rock. No. 11 west drift is in 35 ft. 6 in. from shaft; lode in end 2 ft. wide, but very poor quality. No. 11 west slope, in the back of this drift, is 277 ft. from shaft; lode 4 ft. 8 in. wide, of fair milling quality. No. 11 east drift is in 39 ft. from shaft; lode in the end 5 ft. wide; good milling rock. No. 11 east slope in the back of this drift is 24 ft. from shaft; lode 3 ft. wide, good milling rock.

Notes.—The plat shoot of No. 11 level is working satisfactorily, and we have been holding regularly during this fortnight. We have already turned out 1425 to 1467 tons quartz net, and we expect in the next fortnight to raise a larger quantity of stuff.—No. 5 Shaft: No. 1 west drift is in 65 ft. from shaft; lode 2 ft. 6 in. wide. We have not done any work in No. 1 east drift during this fortnight. No. 2 east drift is in 63 ft. from shaft; lode 1 ft. 6 in. wide. No. 2 west drift is in 40 ft. from shaft; lode 3 ft. 6 in. wide. We have commenced to drive a level between Nos. 1 and 2 east drift which is already in 13 ft. from shaft; lode in the end 3 ft. wide. We are now in average quality quartz. We have raised to surface during this fortnight 200 to 290 tons net. This mine requires close timbering.

NORTH MEXICAN SILVER.—Ottokar Hofmann, November 28: Cusirhuirachic: The progress made during the week in the construction of the mill is very gratifying. I had to name the following: In the boiler room all steam connections are completed, and the two boiler pumps or feed pumps are placed and nearly completed. The floor in the engine room is laid, consisting of 6 in. groove and tongue boards. The heaters put up and connected.—Dryers: The iron shell of the revolving dryer is bolted together, and the whole cylinder mounted on the wheels, which rest on a solid timber foundation. Next week the masons will commence to build the fireplace and flue.—Battery: All five iron mortars are placed on the battery blocks and bolted down. All the foundation timbers for the battery frame are likewise in place. The erection of the battery frame will be commenced next week. The rock breaker has been placed and securely bolted to a heavy framework.—Leaching Tubs: The framework for the foundation of the leaching tubs is in course of erection. With the erection of the vats we cannot commence until the waterworks are in operation, as otherwise they would shrink and crack. Adobe work is progressing. The west side of the whole building, as well as the north side, is nearly closed in.—Waterworks: Very little work on the pipes has been done during the week for want of pipes. The teams loaded with pipes broke down between Chilhuahua and here. I expect them in, however, by Monday, November 30.

NORTH TOIMA SILVER.—Superintendent, November 1: Mine: I am glad to report the continuation of the improvement, referred to in my last letter, in the Esperanza adit, good class ore being broken from the end. The Fortuna adit also shows occasional stones of galena and pyrites. The Salto end is poor, and the vein pinched. We are proving the backs by extending a slope along the roof of the drive. In other stations there is no change to note.

NUNDYBROOK GOLD.—November 23: Webb's shaft, Maharajah reef, sinking below the 95 level, by 21 coolies and a masonry. There is not any change to note, we are only making slow progress, and I am sorry that we cannot make greater headway. We have sunk 9 in.: depth below the 95 ft. level 57 feet. Taylor underlie shaft, Maharajah, sinking below the 95 ft. level, by 18 coolies. We are carrying this shaft down 12 ft. by 5 ft., inside the timber. The lode is about the same in size as I reported last week, 2 ft. 6 in.; it is a kindly looking lode; the results from assays this week are 14 dwts. 9 grs. from bottom of shaft, and 2 dwts. from south end of shaft. The water does not appear to be increasing,

but very little ground was cut this week, 1 ft. 10 in.: depth below 95 ft. level, 15 ft. 10 in. North end, Maharajah reef, 95 ft. level; we have nine coolies employed here; ground driven, 2 ft. 5 in. The rock seems to be a little harder, and not quite so strongly stained with iron, the footwall is running very regular, and letting out a good flow of water. We have not taken any samples from here this week. Length of level from cross cut, 22 ft. 6 in. The engineer expects to get Taylor's shaft pumping engine in working order in a few days from this date, he will then go on with the erection of the winding engine on Webb's shaft. The masons are at work building the bob pit; we have almost finished the bob, and are erecting the angle bob on the top of the underlie; we hope to have this fitted in a day or two.

OURO PRETO GOLD.—November 20: Passagem: In the 215 metre level north-east better duty was done in the advance of this level; the lode opened again to the full height of the level, and appears to be very productive, as an assay made on sample stuff scraped from the face of the forebreast showed gold contents up to 95 grammes, or 2½ dwts. gold per ton. How much lode there is in the footwall is not known. That there is a strong deposit is indicated by what was disclosed by cross-cutting horizontally west towards the big slope. This cross-cut communicated with the slope about 1 metre 50 centimetres under the bottom slope without striking a clean footwall. In the 215 metre level south-west an advance of 18 metres was made in stoping the bottom of this level. The same length of tramway has been laid. The stuff which was quarried being lode was sent up for milling. In the 190 metre level south-west the bottom slope is over a metre high in good looking ore. Stopping towards the winze fitted with the rule on the 215 shaft No. 2 has holed into this stoping ground since. We made communication without draining the bottom. The attack is now made from the 215 by a horizontal cross cut to west in the lode, which cross cut will pass under the rails in the '90 level, and will probably be in a lode all the way. A very fair amount of pyrites ore is coming from this section of the mine, but it does not produce in the mill proportionately to the fine aspect.—Slope between the 190 and 215 North-East: The bottom slope advanced 4 metres. A third slope has been formed by the cross cut from the 215 level, which was driven for exploring the footwall of the lode, and for bringing the slopes into direct communication with the rule on the 215 shaft No. 2 has holed into this stoping ground since.

Shaft No. 2 was sunk 5 metres in the month in the same quartile, lode forming the roof. In the level to Buraco Seco the lode under the roof has assumed greater size. On the first of this month it was 50 centimetres thick, on the 15th it had enlarged to the full height of the level, 2 metres. The value of the lode, as indicated by assay, was 46 grammes to a ton of ore.—Construction: Drawing Wheel: The mason work and foundation work is finished. The erection of the wheel and drums has commenced. Two parties of Italians are working on the Carno watercourse, making good headway. I levelled over to the head weir, and found the position of the dam right. It is, in fact, high enough as to give me the hope that a tunnel 200 metres long, which otherwise would have to be cut through a projecting piece of ground, may be avoided, at all events considerably shortened.—Raposos Mine: Deep adit was advanced 9 metres 50 centimetres. The productive vein which was intersected last month is of no importance. It may be a leader to a stronger deposit of ore. The end is in slate. Middle adit was advanced 10 metres 75 centimetres without meeting with anything worthy of note.—Mina Grande Adit: The driving is suspended until the clearing off the soil is done, and the bottom slope is brought up to the forebreast. In the level north in Sarillo lode under the hanging wall of that deposit. It appears that the last 5 metres were driven in country rock. As the level was advanced 14-50 metres on the 1st of November there should be 9 metres 50 centimetres in lode at least.—Canal Shaft: The exploratory level which is being driven towards the north has got into slate.—Construction: The reservoir is finished for the season. The works connected with the erection of the new mill are being continued.

RUBY AND DUNDERBERG CONSOLIDATED.—Manager, November 22: Dunderberg: There are seven tributaries at work, and 15 tons ore shipped during the week. There is no change to report.—Lord Byron: The north drift from the bottom of the incline has been advanced 4 feet during the week; total, 11½ ft. The north drift, for the first time, has been advanced 4 feet during the week, and have commenced an upraise on it to-day, hoping that it may lead to the orebody at the bottom of the winze from the level above. There are six men at work; no ore shipped during the week.—Home Ticket: The orebody below the 300 ft. level does not look quite so well; it has narrowed from about 4 ft. to from 1 ft. to 2 ft. in width, but increasing in length. The ore is also of a harder character, which will reduce the output considerably for the coming week; the output this week was 25½ tons gross. The upraise above the 300 ft. level continues in very hard rock, consisting of a mixture of quartz and iron, with occasional bunches of good ore; as it is not yet finished, but I believe it will show a satisfactory improvement upon that for September. The output of the No. 1 stamping mill having fallen to pieces on the 18th ult., the erection of the new one and execution of the other repairs required, were forthwith taken in hand, and on the 30th were completed, the stamps having thus been idle only 11 days.—November 18: The results for October show a pleasing improvement on those for September and we are hoping to see still better for the current month since there is no falling off in the quality of the lode, and no interruption of stamping is likely to occur as all the mills are now in good order. Holland's shaft having reached the depth of 55 fathoms, sinking has been temporarily suspended and driving for the next slope commenced. The lode in the new end is fairly productive.

The Mine Captain reports as follows for October: Holland's Shaft: This shaft has been sunk 3 fathoms, making its total depth 94 fathoms 3 ft. The lode is 8 ft. wide; although it is not good enough to send to the stamps altogether, there are some fairly good lines of pyrites in it (of a strong healthy appearance) which are being picked out and sent to the spalling floors.—Slope No. 1 has been extended 2 fathoms 5 ft.; the lode is 5 ft. wide, of good quality.—End under the Bar: This end has been extended 3 fathoms 5 ft. 8 in. The lode in the present end is 11 ft. wide, also of good quality.—Timberwork: The timberwork has been as follows:—Five pieces put in the stall under the bar, five pieces put in No. 2 slope for supporting scales of kellas against the hanging wall; 24 ft. of tramroad put in at the 80; two pieces put in to carry a pent house a little above the 95, also 25 ft. of skiproad put in this shaft and four sets of timber put in as repairs in the old shallow adit. The skip and tramroads have also been kept in repair. Regos (watercourses): The Lava Velho and No. 1 regos have been cleaned up in places and kept in repair, and have given a full supply of water nearly all the month. The new rego has also been cleaned up where required and kept in repair. The output of stone from the mine during the month is 2744 wagon loads, of which 2389 came from the slope, 80, and 335 loads from Holland's shaft. The number of wagon loads per man is 65-91.

UNITED MEXICAN.—November 21: El Diamante: In the 1st drift of Adela west the lode is now 1-20 metres broad, but it is barren. In the 2nd drift of Adela south-east the vein is getting narrower, without showing any improvement. Work has been stopped. The cross cut to the bajo of Adela the same as last week. In the slope in San Antonio the ore was sold in public sale on 19th inst.—San Cayetano de la Ovejera: In the 17th drift of St. Andrew east the lode is only 80 centimetres broad, including a thread 20 centimetres in ore. In the 18th drift of St. Andrew west the lode is 1-20 metres wide, and is barren as the vein was unproductive. In the 20th drift of St. Andrew east the lode is 1-20 metres wide, of which 30 centimetres are in ore of a fair quality. In the 15th winze of St. Andrew the lode is 1-40 metres, but contains very little ore. In the 18th winze of St. Andrew the lode is 1-20 metres, of which 60 centimetres are in ore improving in class. In the cross cut to the alto, the 1st drift of St. Andrew east, in this working we have cut a wall which seems to be the upper one of the lode. Winze of San Lazaro: The object of this winze is to ventilate the plat despacho, where the horse work is done. Santa Monica: In the 16th drift of St. Andrew east the lode is 1-50 metres wide, of which 1 metre is in ore that is improving in quality. In the winze of San Modesto we have cut the lode; it is 1-20 metres wide, but it is barren. In the 18th winze of St. Andrew some fair ore has been found on 80 centimetres of 1-20 metres, which is the width of the vein.—Buenos Ayres: Rights to the property have been kept up.—San Antonio de la Ovejera: The drift of San Antonio east, in the cross cut of Santa Cecilia to the bajo, has been changed to the following cross cut to the bajo to traverse the breadth of the lode; we cut a thread of 20 centimetres wide in ore.—San Miguel de la Providencia, drift of La Providencia: The lode is barren, but shows good appearances.—Adit: In the drift of Santa Gertrudis west the lode is still barren; we have begun to take out the water, and last week the level of it was brought down 2-35 metres, at 22 per metre; \$6 per metre; \$66 were paid for taking out the water at piecework.—Returns San Cayetano, \$6698 70; Returns Santa Monica, \$1920 75.

Mr. Arthur A. Levy, who presided at the meeting of the Asia Minor Mining Company on Monday, placed before the shareholders, with commendable clearness and brevity, the position of the company. It may safely be concluded that, with continued careful management, the mine will yield dividends. The result of the reforms and economies, instituted since the dismissal of the former manager and mining captain, do not appear in the present accounts; but the beneficial effect on the cost of the operations of the company will, no doubt, be better estimated and appreciated at the next meeting. The firm of which Mr. Levy is the head has for some little time past been supplying the funds necessary for the working of the mine. But arrangements are now in progress which will, there is no doubt, result in the directors being supplied with ample funds for the proper prosecution of the works. It is most desirable that this should be done, because according to all accounts the company undoubtedly possesses a valuable property, which only requires good management and a judicious expenditure of money to place it in a dividend-paying condition.

#### THE NEW HOOVER HILL GOLD MINING COMPANY (LIMITED).

The report of the directors for the year ending 30th September 1885:—In the report and statement of accounts submitted to the shareholders of the Hoover Hill Gold Mining Company (Limited) on 15th July, 1884, the directors stated their intention of returning 2s. 6d. per share subject to the sanction of the shareholders. The shareholders having intimated their approval of this course, the directors were advised that the better course for carrying out that proposal was to wind up the Hoover Hill Company voluntarily, and form a new company to purchase its assets. Accordingly extraordinary meetings of the Hoover Hill Company were held on 19th September, 1884, and 6th October, 1884, at which resolutions were passed to wind up that company voluntarily, and to dispose of its assets (after returning 2s. 6d. per share to each shareholder) to a new company, to be called "The New Hoover Hill Gold Mining Company (Limited)" with a capital of 60,000l., in 120,000 shares of 10s. each, in consideration of the allotment of one fully paid-up share in the new company in respect of each share held in the old company. Up to this date 119,555 shares in the new company have been allotted to the holders of a like number of shares in the old company, and 14,944l. 7s. 6d. (being 2s. 6d. per share upon 119,555 shares) has been returned to shareholders in the old company, leaving 55l. 12s. 6d. (being 2s. 6d. per share on 445 shares) in the hands of the liquidator not yet applied for. The statement of accounts to 31st December, 1883, showed that up to that date 96,474l. had been expended by the Hoover Hill Company in the purchase and development of its property, erection of buildings, machinery, &c., after deducting the sums received for bullion sold and for interest and dividends on investments. During the nine months ending 30th September, 1884 (at which date the property was taken over by the present company), the total expenditure at the mine amounted to 5890l. 2s. 6d.; and as the bullion obtained during that period realised 496l. 19s., the net expenditure at the mine amounted only to 943l. 3s. 6d. The expenditure in London for the nine months in question (including law costs) amounted to 1202l. 5s. 3d., and after deducting 849l. 18s. 8d. for interest, dividends, profit on investments, transfer fees and costs repaid, to 352l. 6s. 7d. A sum of 400l. has been set aside for liquidation expenses, and thus the total expenditure on the old company's account from its formation to the 30th of September, 1884, amounted to 98,169l. 12s. 9d., as follows, viz.:—

At mine (net).....	£943	3	6
In London (net).....	352	6	7
Liquidation expenses (estimated).....	400	0	0
	1,695	10	1

From this total the sum of 45,000l. (being the reduction of 7s. 6d. per share) has been written off the original capital, as shown in the balance-sheet.

COLONEL FLYDDEE, of Violet Seton, a gentleman who has been largely assisted in Cornish mining, and to whose energy Mr. CONYBEARE owes a good deal for his return, is at Brighton recruiting his health.

The New Chile Gold Mining Company (Limited) have received a telegram from the mines as follows:—November gold, 2600 ozs.; 2800 tons crushed; 27 days' work.

It is reported that the London, Liverpool, and New York Nickel Mines in Nevada, which were bonded to Mr. Honore, of New York, for \$114,000, by the owners, Messrs. Bell and Mason, has been placed in New York.

A good deal of time was taken up at the meeting of the Wentworth Gold Mining and Indian Estates Company, yesterday, by matters of a somewhat personal character. The attention of the directors is being steadily directed to the cultivation of the estates, and the prospect here seems encouraging. In the end the report and accounts were adopted.

THE meeting of St. John del Rey, on Thursday, was satisfactory. There has been an improvement in the mineral, in the recovery of gold, and in the financial position of the company. A full report will be found in another column.

WITH reference to the Organos Company it is understood that a meeting of the shareholders will shortly take place, at which they will have an opportunity for the full discussion of its affairs.

THE directors of the London and South African Exploration Company (Limited) have declared a dividend of 3s. per share, less income tax, payable on and after the 31st inst., making with the interim dividends paid, a total distribution of 55,000l. for the year.

THE directors of the Russell Gold Mining Company have received the following advices from the mine dated 5th December, 1885:—We have completed the communication from the east drift to the north end of Solague lead, and we are thus enabled to get more of this ore through the mill. I have also commenced to drive west from the 55 ft. south-east level, and expect to cut a very rich vein here. I have started a shift to continue working the north end of the Barber cross-cut with the hope of striking some rich ore, which I am told is buried there. Two men have also been placed on Laurel Hill to clean up and prospect the vein.

#### COPPER ORES.

Sampled December 2, and sold at the Royal Hotel, Trur, December 17, 1885.							
Mines.	Tons.	Price.		Mines.	Tons.	Price.	
Devon Great Consols.	106	£0 14 6		Levant	73	£4 5 0	
ditto	102	0 15 6		ditto	71	5 11 6	
ditto	100	1 0 0		ditto	66	5 11 6	
ditto	95	0 18 0		ditto	60	30 0 0	
ditto	83	0 16 6		Glasgow Caradon	96	3 5 6	
ditto	82	0 16 6		ditto	94	3 6 6	
ditto	72	0 15 6		Gawton	80	0 1 0	
ditto	32	2 12 6		Gunnislake (Clitters)	74	4 17 0	
ditto	28	4 18 0		Wheal Russell	40	2 10 6	
Wheal Crebor	109	2 2 6		ditto	30	1 10 0	
ditto	105	1 19 0		Bedford United	67	3 4 6	
ditto	104	2 5 6		Emilly Copper Mine	36	5 0 6	
ditto	102	2 2 0		Phenix	12	3 4 6	
ditto	100	2 3 6		ditto	6	5 0 0	
Levant	74	4 12 0		East Caradon	7	5 8 6	
TOTAL PRODUCE							
Devon Gt. Consols.	703	£754 10 6		Wheal Russell	70	£116 0 0	
Wheal Crebor	520	1104 10 0		Bedford United	67	216 1 6	
Levant	260	1439 5 6		Emilly Copper	33	131 14 0	
Glasgow Caradon	190	625 19 0		Phenix	13	52 14 0	
Gawton Copper	80	4 0 0		East Caradon	7	37 5 6	
Gunnislake (Clit.)	74	358 18 0					

Average standard.....£75 0 0 | Average produce.....6½  
Average price per ton.....£2 8 6  
Quantity of ore.....2042 | Quantity of fine copper, 141 tons 4 dwts.  
Amount of money.....£4971 18 0  
LAST SALE.—Average standard, £80 6 0 | Average produce.....5½  
Standard of corresponding sale last month, £75 14 0 | Produce, 6½

#### COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	435	£1196 6 9
P. Grenfell and Sons	379½	780 2 0
Nevill, Druce, and Co.	398½	722 17 4
Williams, Foster, and Co.	307½	1056 14 1
Elliott Metal Company	228	610 12 6
Charles Lamber & Co.	230½	605 12 4
Total	2042	£4971 18 0

NO SALE on the 24th December.



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**TREVAUNANCE AND POLBERRO SHOULD BE BOUGHT AT ONCE.**  
There are many mines worth attention, as proceedings of recent share holders' meetings prove beyond doubt. During the last 40 years there has no such opportunity presented itself as the present for investment in British mines. Metals are certain to advance. In well-informed circles no doubt is entertained on this point. Buyers must not further delay orders.

See Selected List published by S. JAMES, 14, Angel-court, London, E.C.

SPECIAL BUSINESS in the following or part:—		
100 Bedford United, 7s. 6	100 Baika Consolidated, 4s. 9d.	100 New Albion, 23s. 6d.
100 Carr Camborne, 2s. 8	4s. 9d.	20 New Emma, 6s.
10 Devon Con., 47s.	50 Bratsberg, 13s.	300 Nouveau Monde, 3s. 3
50 Drakewalls, 3s. 6d.	200 Cartago, offer wanted	50 Nundydroog, 40s.
20 East Blue Hills, 32s	10 Copiapo, £3 6s. 3d.	100 Nine Reefs, fully paid
25 Ecton, 22s. 6d.	20 Canada Copper, 4s. 6d.	17s. 6d.
15 Frongoch, 5s. 6d.	100 California Gold, 3s 3d	100 Ooregum, 19s.
5 Great Laxey, £10 10	100 Callao Bis, new 17s	100 Ooregum pref. 18s 6d.
30 Gunnislake (Clit) 5s	100 Chile (New), 13s. 6d.	100 Oscar Gold, 6s. 6d.
30 Great Holway, 18s 3d	8s. 9d.	70 Oscar Gold, Vendors,
100 Home Mines Est. 15s.	100 Chontales, 2s. 3d.	fully pd. 4s.
30 Killfretth, 11s. 6d.	100 Colombian Hyd., 9s	50 Organo, 23s.
20 Kitty St. Agnes, 19s.	100 Devala Moyer, 10s	50 Orila, 21s.
20 Leadhills, 55s.	100 Denver Gold, 1s. 6d.	100 Pestarena, 3s. 6d.
25 New Kittv, 33s.	100 Eberhardt, 15s pd 3s 9	150 Potol, New, 5s. 6d.
15 New Wt. Caradon, 3s.	2 El Callao, £50.	100 Port Phillip, 2s. 9d.
25 Phoenix United, 36s.	15 Frontino, 15s. 3d.	15 Panguillo, £3
30 Polberro, £25 4s	50 Glenrock, 9s. 6d.	100 Ruby, 8s. 6d.
50 Prince of Wales 7s.	100 Gold Coast, 1s. 3d.	20 Richmond, 24 1/2
100 Parys Copper, 6d.	100 Hoover Hill, 5s. 9d.	25 Rio Tinto, £11.
5 Roman Gravel, 5 1/2	100 Indian Consolidated,	20 Schwab's Gully, £37 6
10 So. Condurrow, £5 1/2	23s. 9d.	50 Silver Queen, 33s. 6d.
20 South Darren, 10s.	10 Javali, 3s. 6d.	100 Spitzkop, 14s.
10 South Frances, £6 1/2	100 Kohinoor B, 4s. 6d.	50 Tacquah, 2s. 3d.
30 Trevaunance, 44s. 6p.	100 La Plata, 6s. 6d.	125 Teocapilla, 6s.
20 Van, 34s.	200 Lisbon-Bel, New 19s	11 Tolima A, £2 1/2
10 West Kittv, £7 1/2	pd. 3s. 6d.	10 Tollna B, £3
10 West Bassett, £3 1/2	50 La Trinidad, wntd.	100 Transvaal Gold, 5s. 3d
20 Wheel Crebor, 28s. 6d	20 Mason-Barry, 2s.	20 Tambacherry, 11s. 6d
20 Almada, 13s 6 pd 5s	50 Montana, 72s. 6d.	20 U. Mexican, £3 1/2
28 Asia Minor, 5s	20 Mysore Gold, £5 15s	100 Victoria Gold, 3s. 6d.
100 Alankoo (P.), 2s. 6d.	250 Nacupai, 6s.	

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in all well-established and respectable Mining Companies; also, in  
English and Foreign Funds, Railway Stocks, &c.

LEAD ORES.			
Date.	Mines.	Tons.	Price per ton.
Dec. 13—Fozdale	120	£10 8 6	Walker, Parker, & Co.
—D'Eresby	10	8 6	ditto
—Yorkshire	25	6 18 6	John Walton and Co.
—ditto	15	6 18 6	Jacob Walton and Co.
—ditto	10	7 0 0	Metallurgical syndicate
18—South Darren	20	12 8 6	Walker, Parker, & Co.
BLENDE.			
Date.	Mines.	Tons.	Price per ton.
Dec. 15—D'Eresby	12	£2 3 0	Purchasers.
BLACK TIN.			
Date.	Mines.	Tons c. q. lb.	Price per ton.
Dec. 1—East Blue Hills	3 17 2 3	£53 7 6	Daubux and Co.
—ditto	0 7 0 24	33 15 0	ditto
18—Prince of Wales	1 7 0 10	49 11 0	ditto
—Metal and Flow	3 13 3 24	47 5 0	Williams, Harvey, & Co.
15—Phoenix United	23 0 0 0	52 18 0	Tamar Co.

**GAS SHARES.**—The principal business in these shares, according to this evening's report of Messrs. W. L. WERNAND & Co., of the Stock Exchange and Fitch-lane has been:—Bahia, 25; Bombay, 6 1/2; British, 4 1/2; Brentford Four per Cent. Debenture, 105; Buenos Ayres, 14 1/2 to 14 3/4; Continental, 4 1/2 to 4 3/4; ditto, New, 30 1/2 to 30 3/4; ditto, Seven per Cent., 35 1/2 to 35 3/4; European, New, Seven and a Half per Cent., 15 1/2; Gas, A, 23 1/2 to 23 3/4; ditto, H, 15 1/2 to 15 3/4; ditto, Four per Cent. Debenture, 105 to 105 1/2; Imperial, 21 1/2 to 21 3/4; Mauritius, 11 1/2 to 11 3/4; Monte Video, 17 1/2 to 18 1/2; Ottoman, New, 18 1/2 to 19; Para, 4 1/2; Rio de Janeiro, 23 1/2 to 24 1/2; San Paulo, 15 1/2; South Metropolitan, B, 23 1/2 to 24 1/2. Gas: stocks little doing.

**NEW HOOVER HILL GOLD MINING COMPANY**

(LIMITED).  
Notice is hereby given that the ORDINARY GENERAL MEETING of the New Hoover Hill Gold Mining Company (Limited), will be HELD at the City Terminus Hotel, Cannon street, London, E.C., on TUESDAY, the 22nd day of December, 1885, at Twelve o'clock noon, to receive the report of the directors, and statement of accounts for the year ending 30th September, 1885, and to transact the general business of the company.

The Transfer Books will be closed on the 18th inst. until after the day of meeting.  
By order,  
JAMES FRASER, Secretary.  
Company's offices, 2, Tokenhouse Buildings, London, E.C.  
Dated this 12th day of December, 1885.

**Notices to Correspondents.**

Letters containing Correspondence and all other Contributions should be addressed to "The Editor." Rejected matter cannot be returned. Correspondents are requested to write on one side of the paper only.

Communications relating to Advertisements, Subscriptions, or applications for copies of the *Mining Journal* should be addressed to "The Publisher." The Annual Subscription to the *Mining Journal* is £1 4s., post free.

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**THE MINING JOURNAL,**  
**Railway and Commercial Gazette.**

LONDON, DECEMBER 19, 1885.

**THE REVIVAL IN INDIAN GOLD MINING.**

In view of the remarkable rise which has recently taken place in the value of the shares of a great number of the Indian gold mining companies, it may not be out of place to refer briefly to the circumstances under which these enterprises were brought before the investing and speculating public, and also glance at the causes which led to a temporary, and at one time an apparently permanent, disappointment of the hopes and expectations which were formed respecting them. An examination of this latter point, taken in conjunction with what is now being done in regard to them, and taking also into consideration their present position, will perhaps enable some estimate to be formed as to how far the recent great rise in value is warranted by facts, and whether it is likely to be permanent. It is now some four or five years since Mr. BROUGH-SMYTH, who was considered to be one of the ablest experts in the employment of the Indian Government, made favourable reports regarding the highly mineralised character of the auriferous reefs which were known to exist in portions of the Mysore and Wynad districts. That those reports were made in good faith by Mr. BROUGH-SMYTH no one, we should imagine, could entertain a doubt. His reputation stood high, and those who had the opportunity of hearing him speak at one or two of the earlier meetings which were held in connection with the newly-formed companies, undoubtedly carried away a favourable impression of that gentleman's sincerity and frankness. It is to be feared that since then, during the long period of almost utter stagnation and entire disappointment which has existed till recently in regard to Indian gold mines, the statements of Mr. BROUGH-SMYTH have been severely criticised, and much doubt thrown upon them. But viewed in the light of what is now taking place in the Mysore and Wynad districts, it seems probable, after all, that these adverse comments may prove to have been premature, and that a really complete and thorough verification of all his statements will be found in the results shown, before very long, by the Indian gold companies who are advanced in their working. The simple fact is that the public, at the time these Indian gold mining companies were brought forward, rushed into them with hopes unduly elated, and without any adequate or practical knowledge of the difficulty of the work which the companies were formed to carry out. Each shareholder who took shares thought he had discovered an El Dorado. The capital, which in the aggregate was something enormous, was subscribed with a celerity, and even an eagerness, which has seldom been surpassed in the history of joint-stock enterprise. They deluded themselves into the belief that a brilliant success was achievable in a near future, and it is to be feared that this delusion was fostered by many practical men who ought rather to have pointed out that success in Indian mining, as in every other difficult enterprise, is only to be achieved by hard work on the part of the executive, and patience on the part of those who find the money. Had this initial truth been thoroughly apprehended at the commencement of Indian gold mining, so much of that despondency and utter want of heart on the part of shareholders would not have existed as has existed during the past two or three years.

On previous occasions we have pointed out, sometimes in reply to the enquiries of impatient investors, that in Indian gold mining, as, indeed, in all other classes of mining, a long period of time must, in most cases, necessarily elapse between the commencement of operations, and the proper performance of the absolutely indispensable exploratory work which must be effected before mineral properties of this description can be brought into a position to make continuous and remunerative returns. A case in point is to be found in the success of the Mysore Company, which has, undoubtedly, by its wonderfully rich returns, given the impetus to the present marked revival amongst nearly all the Indian gold mining companies. The Mysore has not attained its present enviable position by any stroke of luck, nor has it attained in a brief space of time. Those who are best acquainted with that company are well aware that it has only been by dogged perseverance, in the face of oftentimes of great difficulties, and by good fortune in having exceptionally good management, that Mysore is now in the position of being the successful pioneer of Indian gold mining. Success having been shown to be possible, the important question which arises from that demonstrated fact is, whether there are sound and substantial grounds for believing that this success will be continuous and permanent, and whether adjoining properties may hope to participate in it; or whether it will be merely a flash-in-the-pan, with no elements of permanency about it. On this point it may be stated that, for several weeks and months past, private advices have persistently shadowed forth that this upward movement was imminent, and the practical test of the past few days' experience shows how well founded those prognostications were. That there are the elements of permanency in

the movement may perhaps be gathered from the few facts which follow.

It has always been recognised that gold in quantities could not be expected from the Mysore and Wynad fields until a depth was attained beyond that which was reached by the ancient miners, and this is the important point to which sufficient prominence was not, perhaps, given—or, at any rate, a point which too many shareholders ignored in the early days of this industry. Of course, no one could tell precisely what this depth was, or how much it varied in different localities, though surmises on this point were freely hazarded by experts. As a matter of fact, scarcely anyone seems to have given the old workers credit for having gone to the depth that recent explorations have proved they reached. The Mysore is the only one out of the numerous companies which can really be said to have got to the bottom of these old workings. It is not our intention at present to go into all the details connected with the position and prospects of the various undertakings now at work on the Indian gold fields, but a few salient points may be of interest. The Mysore Company occupies what may be said to be a middle position on the run of the lodes. The attention of the management is at present concentrated on what is known as the Champion lode, where they are at work, and getting those rich returns which are published from time to time in our columns. Facts are better than generalities, and the following brief statistics clearly show that Mysore is rapidly increasing its outturn of gold. In the month of June, 1884, they obtained about 53 ozs. of gold, valued at 195*l*. in round figures, from 101 tons 11 cwt. of ore. There is no occasion to mention the monthly returns; but, taking four-monthly periods, in September of the same year, the returns were 128 ozs., valued at 434*l*., from 126 tons of ore. For January, 1885, the returns were 230 ozs., valued at 896*l*., from 177 tons of ore. For April, the output was nearly 312 ozs., valued at 1227*l*., from about 70½ tons of ore. For August, over 366 ozs., valued at 1436*l*., from 155½ tons of ore; and the recent report from the manager states that the returns for November were 1096 ozs., valued at 4200*l*., from 362 tons of ore. This last return is at the rate of 50,000*l*. a year, and, as the total capital of the company is only 135,000*l*., it needs no words to point out the handsome return this will give on the capital. It may also be safely assumed that, when the delays necessarily attendant upon preliminary works of development have been effected, these returns may be regarded as small compared with what may be expected to be presently obtained.

This success, as we before observed, has been the stimulating cause of the all-round rise which has taken place in the shares of nearly all the companies possessing property adjacent to or in the neighbourhood of Mysore. It is well known that several of these adjoining companies have been awaiting the result of the working at Mysore. Amongst those which will be, and indeed have been so far as the price of the shares is concerned, affected by Mysore success, are the Nundydroog, the Ooregum, the Indian Consolidated, the Nine Reefs, the Mysore Reefs, and one or two others. As regards the last-named company, it has just been taken out of liquidation for the purpose of prosecuting active operations, and as the calls will be small there is no fear as to sufficient capital being provided. There seems ample testimony that the Champion lode of the Mysore actually runs through the Mysore Reefs. The Nundydroog Company, also lying to the north of Mysore, but not immediately adjoining, is said to possess five well-defined lodes, and the works are under the same able management as Mysore. Immediately adjoining the Mysore Company on the north is the Ooregum. It is well known that, prior to the suspension of operations at Ooregum, the company had actually obtained 40 ozs. of gold from 44 tons of ore. This company is also under the supervision of the able manager of the Mysore. On the south, and immediately adjoining the Mysore, the Indian Consolidated are at work on the Old Colar, which has been amalgamated with the Indian Consolidated. At a meeting of the shareholders held on Wednesday the directors were authorised to sell about one-fifth of the property, it being too extensive for one company to work, and no doubt this is a course which will be followed, to the advantage of the shareholders, by other companies. It may be mentioned that the Indian Consolidated has also a large extent of property in the Wynad district. The Nine Reefs has also been taken out of liquidation with the view of continuing working. We have no space to refer, in any detail, to other companies which will be, and in some cases have been, beneficially affected by the general revival of Indian gold mining, but mention may be made of the Devala-Moyar, Indian Gold Mines of Glasgow, Indian Glenrock, and Wynad Perseverance. An important feature in connection with some of the above-named companies is the large area of the property which they possess; and no doubt, as is referred to above, some of them will follow the sensible example of the Indian Consolidated, and sell or lease the portions which they are unable to work. From this source alone large sums of money will possibly be derived, which can be applied either to distribution amongst the shareholders, or for carrying on working on a larger scale than is possible with only limited amounts of capital.

The present is an interesting and important period for the holders of shares. The periodical reports from the various companies, which are regularly given in our columns, are now read with an awakened and hopeful interest. These reports, no doubt, contain about all the information which can be given from time to time, and it is from these, or from enquiries at the offices of the various companies, that shareholders, or intending investors, should seek information in preference to forming an opinion from mere idle gossip. It is no part of our province to express views which may influence our readers one way or the other; but it is within our limits, as mining journalists, to suggest that it can scarcely be supposed that the Mysore alone, amongst the many properties, is the only one which possesses gold. It has been clearly proved that, in the case of this particular company, gold does exist in rich quantities, and, with this ascertained fact before them, it certainly does seem that this is not a time to abandon sets which are immediately adjoining, or in the neighbourhood of Mysore. There has always been a lingering feeling in the minds of most of the shareholders in Indian gold mines that their properties never had fair trials, and that in too many cases the large sums of money which were expended were not laid out with judgment and economy. There is not much room for doubt that this belief is, in some respects, well founded; and those people who are best acquainted with the districts, and can speak with considerable authority on mining matters, will be greatly disappointed, and wholly out in their calculations, if some of the companies referred to above do not, with good and economical working, show results equal to and perhaps even better than Mysore. The broad and all-important fact to be borne in mind is—that the company (Mysore) which has persevered to the requisite depth has actually come upon what they were looking for, and which they had every reason to suppose they would find there. It is unreasonable, and even absurd, to argue for a moment that the eight points which are yielding rich ore in Mysore can all give out at once; and it is equally beyond the range of common sense and experience to imagine that the reefs from which the present rich returns are being made begin and finish in the Mysore property. It is to be sincerely hoped, therefore, looking at all the circumstances, that there are elements of durability in the present revival in Indian



The advancing tendency which characterised this metal at the close of last week was continued on Monday, when up to 94*l.* was paid for cash parcels of fine foreign, but since which the price, in sympathy with other metals, has fallen away, on Tuesday there being a reduction of 10*s.* per ton, and on Wednesday, though no particular change took place in quotations, still the feeling was decidedly easier, and yesterday the price dropped to 93*l.* 2*s.* 6*d.*, rallying again, however, to 93*l.* 5*s.*, and then receding to 93*l.*, and to-day has fallen a further 5*s.* down to 92*l.* 15*s.* cash closing a little stronger. A fairly favourable fresh feature in the market is the deliveries for the first half of the month, which from London have been 757 tons. In this quantity there is nothing special to be noted, but it shows a little better regular trade. We draw attention to the great falling off in the deliveries during the past few months only last week, and showed that that was the most unfavourable feature in the whole market. An improvement in the deliveries, therefore, just now is a most welcome sign, though that improvement be only very small. There is a great deficiency to be made up, the deliveries for the past 12 months being about 2200 tons less than in the previous 12 months, or, in other words, a good month's deliveries. The bulk of this deficiency has been from London, and if we take the deliveries in America, as well the reduction is still more serious. In Holland the deliveries have been well sustained at about an average, and there is no ground for complaint with regard to them, but where the great restoration in trade is needed is in London, and it is owing to this depressed branch of business that values above current prices cannot be realised. At the same time what deficiency there may be in the amount of regular business doing in London it is fully made up by extra speculative transactions, the strength of operators and holders being quite sufficient to give almost all needful support that is now required. Though the higher prices may in some measure tend to check the legitimate demand and prevent consumers purchasing as freely as they might otherwise be disposed to do, still it is not so with operators. They are far more ready to buy at current rates than what they were when prices were some 20*l.* per ton lower than at the present time. Then they were disposed to take a somewhat gloomy view of the prospect, but now



they consider that there is every probability of prices being sustained, if indeed not further advanced. There are other matters to be considered beside the price, and it is remarkable that in spite of the serious declension in deliveries and the apparently tempting price for suppliers to increase their output, still statistics undergo very little change. We do not mean in any one particular month; but, to take a broader and wider view of the market, there are now about 200 tons less stock than there was a year ago. One month's returns may be affected by any special feature, the receipt or non-receipt of special advices, shipments being pushed forward to catch any one particular steamer, or from a variety of other causes; but a whole year's returns show up the true statistical position of the market, irrespective of the changes and fluctuations that may occur from many and different causes. Looking again at the statistics from this broad point of view, attention is naturally directed to the supplies, and much as has been said about present prices encouraging supplies it is to be noted that up to the present, there has not been the slightest signs of such a result; on the contrary about a proportionate decrease to the reduction in deliveries. The supplies from Straits have undergone very little change, being only a few hundred tons less during the past 12 months, compared with the previous 12 months, the shipments to London being somewhat heavier, and those to America lighter, but the shipments from Australia have fallen off. It might, however, be urged that since the market is statistically the same prices ought to be no higher than they were a year ago. But this is a mere matter of opinion. We can only point out that at this time last year prices were unusually depressed, and if a comparison be drawn between stocks and prices now with those at the same time of 1883 prices will be found to be still comparatively cheap.

SPELTER continues quiet but very steady, at 14*l*. 17*s*. 6*d*. to 15*l*. for ordinary brands, and 15*l*. 2*s*. 6*d*. to 15*l*. 5*s*. for specials. LEAD is also quiet with very little doing, and Spanish is quoted at 12*l*. 2*s*. 6*d*. to 12*l*. 5*s*. and English at 12*l*. 10*s*. to 12*l*. 15*s*. per ton. ANTIMONY is steady, at 35*l*. 10*s*. to 36*l*. per ton. STEEL.—A slightly better business is doing and a fair request exists for steel-plates. TIN-PLATES.—The market is steady and without any variation. QUICKSILVER.—Quotations unchanged, with only a retail business passing.

### NOTICE—CHRISTMAS.

The MINING JOURNAL will next week be supplied to the Trade only on Thursday evening at Half-Past Seven. Subscribers' copies will be forwarded by Special Midnight Newspaper Despatch that night.

The Mining Share Market will close at 1 P.M. on Thursday, and our report to that hour, as well as that of the Metal Market to the close at 1:30, will be given. All mine reports and other news matter must reach 26, Fleet Street before 10 A.M. on Thursday, and no advertisement can be received after 2 P.M.

The MINING SHARE MARKET has been more than usually active this week for several descriptions of home mines. Prices generally have been well sustained, and in some instances a good advance has taken place. In the beginning of the week there was a complete mania for Indian gold mines, and an enormous rise took place in many of them, but the prices thus reached were not long maintained, and a heavy fall took place on attempted realisations. The home mines mostly dealt in have been Van, Wheal Crebor, West Godolphin, Wheal Grenville, East Blue Hills, Tincroft, Roman Gravel, Metal and Flow, New Langford, Devon Great Consols, Wheal Agar, and a few others.

TIN has kept firm, without any appreciable advance; but a fair business has been done in shares. Blue Hills are quoted  $\frac{1}{2}$  to 1; this mine, as will be seen from the report, is looking well, and will increase its returns. The chief point of interest is the 66 fm. level, which is being driven towards East Blue Hills, and where the lode is worth 20*l*. per fm. Carn Brea, 3 to 3*l*; Cook's Kitchen, 9 to 10; Dolcoath, 75 to 77; East Pool, 48 to 49. East Blue Hills have been largely dealt in, and leave off  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Killifreth, 10*s*. to 12*s*. 6*d*.; New Kitty,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Prince Royal, 4*s*. to 6*s*.; South Condurrow, 5*s*. to 6*s*.; South Crofty, 6*s*. to 6*l*.; South Frances, 6*s*. to 7*s*.; Tincroft, 6 to 6*l*.; Trevannance, 2*s*. to 2*l*.; West Basset, 2*s*. to 3*s*.; West Frances, 8*s*. to 9*s*.; West Godolphin,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; West Kitty, 7*s*. to 7*l*.; Wheal Agar, 19 to 20; Wheal Basset, 5*s*. to 6*s*.; Wheal Kitty (St. Agnes),  $\frac{1}{2}$  to 1.

Wheal Metal and Flow,  $\frac{1}{2}$  to 1; the month's sale of ore from the Flow with the partially-erected machinery realised 174*l*. 14*s*. 9*d*. Wheal Grenville, 16*s*. to 17*s*.; the accounts for the meeting on the 23rd show tin sales to the 17th—198 tons for 10,516*l*. 4*s*. 3*d*. Costs, 6795*l*.; profit on four months working, 3720*l*.; balance in favour of the mine, 4751*l*. 8*s*. 11*d*. The points in operation in the mine are worth in the aggregate 597*l*. 10*s*. per fathom. The bottom of the mine 205 fms. level east has been driven 54 fms., and is worth 7*l*. per fm. Polberro, 2 to 2*l*.; Phoenix,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Goodevere, 1 to 1*l*.; West Polbreen, 12*s*. to 14*s*.

COPPER has been firmer, with a tendency to rise. In shares an increased business has been done, and a few shares have advanced. Bedford United,  $\frac{1}{2}$  to  $\frac{1}{3}$ . Devon Great Consols, 2 to 2*l*.; the sale of ore (700 tons) realised 754*l*. 7*s*. 6*d*. Mellanear,  $\frac{1}{2}$  to  $\frac{1}{3}$ . New West Caradon, 2*s*. 6*d*. to 3*s*. 6*d*. Wheal Crebors have been in good demand for investment, and leave off  $\frac{1}{2}$  to  $\frac{1}{3}$ ; the bottom level has improved to 2 tons of copper ore and 4 tons of mundaic per fathom, and there are rich stones of tin in the mundaic. The points in operation in the mine are worth in the aggregate 56 tons of copper ore per fathom and 20 tons of mundaic per fm. The sale of ore, on Thursday (520 tons), realised 1104*l*. 10*s*. Prince of Wales, 6*s*. to 8*s*.; New West Caradon, 2*s*. 6*d*. to 3*s*. 6*d*. West Seton, 4 to 4*l*.; the accounts at the meeting showed a loss of 560*l*. and a call of 5*s*. per share was made.

LEAD mines have been firm, and fairly dealt in without any material alteration in prices. Vans have been firm at  $\frac{1}{2}$  to  $\frac{1}{3}$ . New Langford have been in request, but there are no sellers at present, all anxiously awaiting a further trial into the Silver lode. Shares are quoted  $\frac{1}{2}$  to  $\frac{1}{3}$ ; an assay of the ore broken from the silver branch, now 6 in. wide, yielded 354 ozs. of silver to the ton. Great Laxey, 10 to 11; Roman Gravel, 4*s*. to 5*s*.; Leadhills, 2*s*. to 2*l*.; D'Eresby,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Ecton,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Great Holway,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; South Darren, 9*s*. to 11*s*.

FOREIGN MINES.—An enormous amount of speculation has been going on in Indian gold mines, and the fluctuation in prices from day to day have been very considerable. In the early part of the week a great rise took place in several of the most prominent mines. Almada and Tinto, 3*s*. 6*d*. to 4*s*. 6*d*.; Birdseye Creek,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Balkis, 4*s*. to 5*s*.; Bratsberg, 10*s*. 6*d*. to 12*s*. 6*d*.; Callao Bis, 8*s*. to 10*s*.; Cape Copper, 25 to 26; Chile Gold, 6*s*. to 7*s*.; Colorado, 2*s*. to 3*s*.; Colombian Hydraulic, 8*s*. to 10*s*.; Indian Consolidated reached 30*s*. early in the week. These shares then dropped to 1*l*. and leave off  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Copiapo,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Frontino and Bolivia, 10*s*. to 12*s*.; Hoover Hill,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; La Plata, 6*s*. to 7*s*.; Mysore reached 7*l*. 10*s*. per share; then they declined rapidly to 5*s*. and, after various fluctuations, leave off  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Nundydroog reached 2*s*. and leave off  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Oregom, 1*s*. 3*d*. to 1*s*. 9*d*.; Organo,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Oriz, 1 to 1*l*.; Panulillo,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Richmond, 4*s*. to 4*l*.; Santa Barbara, 30*s*. to 35*s*.; St. John del Rey, 65 to 70; United Mexican,  $\frac{1}{2}$  to  $\frac{1}{3}$ ; Victoria Gold, 3*s*. 6*d*. to 4*s*. 6*d*.; Santa Maria, 21*s*. to 23*s*.;

Potosi, 4*s*. 6*d*. to 5*s*. 6*d*.; Ruby, 8*s*. to 10*s*.; Nine Reefs, 15*s*. to 17*s*.; Mysore Reefs, 11*s*. 3*d*. to 13*s*. 9*d*.; Lisbon Berlin, 3*s*. to 4*s*.; Nouveau Monde, 2*s*. 6*d*. to 3*s*. 6*d*.; Oscar, 4*s*. to 6*s*.; Pestarena, 3*s*. to 4*s*.; Schwab's Gully,  $\frac{1}{2}$  to  $\frac{1}{3}$ .

### Mining Notes.

We do not exaggerate when we say that one of the principal markets of the Stock Exchange during the whole of the past week has been that for mining shares. Yesterday (Friday) week the public, after a long and uninterrupted period of denial, awoke to the fact that legitimate mining can be attended with handsome profits, upon the publication of the result of the November working at the Mysore Mine, and as a consequence on Saturday and Monday there prevailed a general influx of public buyers as to cause such an excitement and violent changes in values as have not been witnessed for many many years. Of course the principal demand was for Mysore shares, for which there was an unmistakable rush on Monday, with the result that the shares touched 7*l*. buyers, and all other adjoining mines, particularly Nundydroog, participated in the advance. The following table shows the variety and extent of the fluctuations, the prices given in all cases being the closing quotation for the day, except Monday, where the top price reached is noted:—

	Satur- day.	Mon- day.	Tues- day.	Wed- nesday.	Thurs- day.	Fri- day.	Friday night.
Dyala Myr Indian Con- solidated.	9/ 11/	10/ 11/	14/ 15/	13/ 12/	11/ 10/	9/ 8/	9/ 8/
Indn. Glen- rock	19/ 20/	13/ 13/	13/ 13/	13/ 13/	11/ 11/	18/ 21/	13/ 13/
Mysore	5/ 7/	7/ 8/	9/ 11/	3/ 3/	8/ 10/	3/ 3/	3/ 3/
Nundydroog	1 1/2	1 3/4	2 1/2	2 1/2	1 1/2	1 1/2	1 1/2
Oregom	10/ 15/	13/ 13/	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Nine Reefs	12/ 13/	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Mysore Reefs	—	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

In face of such an exceptional rise many realisations were to be anticipated, and these following on Tuesday and Wednesday prices drooped a little, and pessimist critics thought all was over. It was not so, however, for a notable feature of the week has been the comparative steadiness and confidence of buyers. This is attributable mainly to three causes. The public and market interest is principally centred upon the Mysore Company. Now this company has a "clean slate." It has steadily pegged away towards the development of the mine, and has at length been rewarded handsomely. Now during the time that this work has been proceeding the confidence of the directors and shareholders has not been shaken; and although the public, who have not been interested, are greatly astonished to find that the Mysore Company is developing magnificently it is not so with the shareholders. They, it is generally understood, have no intention to part with their holdings, and here is the first and principal reason for the large rise. Another influence which has also helped the upward movement is the steadiness of the buying. If the "bears" have been persistent buyers, holders have been equally determined, and this was apparent to a marked degree on Thursday, when in face of a rise of 1 per cent. in the Bank rate and generally lower Stock Exchange values, the market for mining shares was fairly well supported. Thirdly, there is a strong impression that the Mysore Company will follow the example of the Indian Consolidated, and divide its large property for sale to subsidiary companies.

YESTERDAY morning Indian mining shares were generally a shade lower, but towards the afternoon a strong upward tendency prevailed. Mysore shares advanced 1*l*. within an hour. The buying of these shares, and of the Indian Consolidated Company continued until the close of the market, which ended strong at the best prices of the day. All sorts of rumours and statements are made. It is certain, however, that only a comparatively few Mysore shares are "on the market." The capital is only 135,000*l*., and the amount of business in the shares this week must have reached millions. The variations in Indian Gold Mines of Glasgow shares have been even more extensive; but these shares have not been nearly so largely dealt in here. During the whole week members of the Stock Exchange have abandoned their natural homes in the various other markets to flock into that for mining shares, which, indeed, has shown more real animation than any other. The demand has, in fact, been so marked and so steadily maintained under the circumstances, that it is probable it will be continued, perhaps, up to the very eve of the holidays. The attention thus attracted to Indian gold shares has naturally extended a beneficial influence to gold shares generally, which are mostly a fraction better.

THE revived interest in gold mining is already bringing fresh companies upon the market. The Centennial Gold Mine (Limited) asks for a capital of 75,000*l*., to take over the gold mine of that name in Placer County, California, where operations are at present being actively prosecuted. A report from the manager dated September 10 states that 8 or 10 tons from the deepest part of the vein yet opened would mill up to assays varying from \$55 to \$73 per ton. It is proposed to erect a 10-stamp mill at once, which should crush 15 tons a day. Averaging these at \$30, or 6*l*., gives 90*l*. per day, less cost of production 12*l*., leaves a net profit of 23,400*l*. a year. The manager also reports that the mine will gain in value as depth is attained, and that the vein "is the true fissure vein in the most perfect formation that could be found on the Pacific Coast." The vendor, who is the promoter, takes 5000*l*. in cash, 15,000*l*. in shares, and the balance in shares or cash, at option of the directors.

THE prospects of the Indian Consolidated Gold Company seem to be more encouraging than at any time since the formation of the company. Their neighbour, the Mysore, has attained a great success, and this has given a remarkable stimulus to the neighbouring mines. The Indian Consolidated has already felt the benefit in the increased value of its shares. At the meeting of the shareholders on Wednesday it was decided to sell a portion of the property, not exceeding one-fifth, the area being too large for one company to work. The object now being sought in the working is to sink below the level of the old native workings, when it is anticipated that rich discoveries of gold will be made. A full report of the meeting appears in another column.

THE unfortunate dispute in Bratsberg still continues. Three of the directors, at the wish of a considerable number of shareholders, have resigned their seats, but the other two directors have as yet declined to do so. The meeting called for Thursday was further adjourned. It is to be hoped that, before the next meeting, means will be found to put an end to a state of things which can only terminate in disaster to the company.

THE directors of the Ruby and Dunderberg Mining Company received the following telegram from Eureka, on Tuesday:—No tribute ore shipped or smelted during the week; 13 tons ore smelted on company's account, producing \$410.

THE following telegram, dated December 15, was received on Wednesday from the manager of the Colorado United Mining Company (Limited):—Shipped car load (10 tons) ore to-day.

THE New Potosi Company have received the following telegram, which was sent off from the mine on December 4:—30 stamps running winze below No. 3 level main shaft. Quartz running  $\frac{1}{2}$  oz. to the ton. All works have been resumed.

THE directors of the Venezuela-Panama Gold Company received the following telegram from the mine on Monday, giving result of working for first half of the month:—60 stamps; 12 days' work, 1026 to 1051 tons of quartz milled; 1101 to 1125 ozs. of gold on hand. Better results for next half of the month.

THE Richmond Consolidated Mining Company have received the following telegram from the mine at Eureka, Nevada:—Week's run (one furnace), \$18,000, from 315 tons of ore. Refinery, \$16,000.

THE Rio Tinto Company (Limited) announce payment of the Drawn Bonds of their Five per Cent. Issue of 1884, and coupons on their Five per Cent. Issues of 1880 and 1884, due 1st proximo. They invite holders to present coupons or drawn bonds at once.

FOR some time past the Wynaad Perseverance Estate and Gold Mining Company have been devoting themselves, with a fair amount of success, to the cultivation of coffee, cinchona, and cardamoms. But the shareholders, aroused by the brighter prospects which has dawned on Indian Gold, evidently feel it their duty to place the company in a position to resume mining operations. This view was strongly pressed upon the directors at the meeting of Tuesday. It is safe to say that the directors do not require much urging, but they are naturally anxious not to be too precipitate. When the matter becomes ripe the board will be prepared to give proper attention to it.

THE Cornish Mining Exchange continues inactive. Animation can now only be looked for after Christmas. The principal attention of the week has been given to Dolcoath, at 76*l*. for the meeting, and 76 for the settling. East Pools are easier, at 48*l*.; West Frances firm, at 8*l*. to 9*l*.; the meeting is on Thursday. Wheal Bassets have receded to 5*l*. Local people, despite sanguine anticipations from the agent, are afraid the mine will suffer from the water this winter, because of Wheal Uny being idle. It is reported that the water has already increased at West Basset.

AT Carn Brea they are now returning tin from the eastern—the Druid—part of the mine. They have been making preparations here for some months, and have a skip-road completed from surface to bottom of the shaft. The stuff is said to be of a fair average. The meetings of Carn Brea and Tincroft are next month.

MESSES. Freeman and Bloomfield, the London agents of the Kimberley Central Diamond Mining Company (Limited), have received the following telegram from the company's head office at Kimberley. Week ending December 12:—Blue ground hauled 2900 loads; diamonds found, 2650 carats. During the week hauling was discontinued two days.

THE Barrett Gold Mining Company (Limited) have received the following:—November result, with five stamps, 280 tons crushed, yielding 350 ozs. gold.

IT is pleasing to find Blue Hills promises to follow West Kitty in making of St. Agnes an important mining district. At the meeting, held a few days since, a profit of some 18*l*. was shown. This profit is, of course, inconsiderable; but it is seen from the report of the proceedings that there have been extra deadwork charges, that more tin was actually returned, and that the mine is being developed well. Mr. James Wickett and Mr. Walter Pike are not given to exaggeration, and it may be accepted that the views of those gentlemen to the effect that Blue Hills shares should be higher than they are—in fact, much dearer—are correct.

THE directors of the Pitangui Gold Mining Company (Limited) are in receipt of a cable message from the agents of the company in Rio de Janeiro, dated the 11th inst., advising the amount of produce obtained for the month of November as being 100 oits. of gold. The value of this produce would amount, at 8*s*. 6*d*. per oitava, to 42*l*. 10*s*. sterling.

THE directors of the Santa Barbara Gold Mining Company (Limited) are in receipt of a cable message from Rio de Janeiro, dated the 11th inst., advising the amount of produce obtained for the month of November as being 4100 oits. of gold. The value of this produce would amount, at 8*s*. 6*d*. per oitava, to 1742*l*. 10*s*. sterling. The message adds:—"Drought, water short part of month," which explains the falling off in the produce as compared with October.

THE final steps have been taken in respect of the affairs of Wheal Prussia and Cardrew. The mine has been idle for some time. Shareholders met at the offices of the pursuer (Mr. Teague) at Redruth on Tuesday, and had submitted to them a statement, which showed liabilities to merchants and bankers of 572*l*. 10*s*. 9*d*. It was decided to make a call of 3*s*. per share, this it is thought being sufficient to wipe off all debts. A committee for winding up the company was appointed, this consisting of the pursuer, Mr. C. Bawden, and Mr. Thomas Pryor.

IN another column will be seen the resolution arrived at as a basis of discussion by the County Committee on Cornish Mine Tenure Reform. It far from embraces the cardinal proposal of Mr. Conybeare—that a company should apply to a Court, and compel land to be applied to mining operations in the event of the lord's refusal, and when it is claimed the land was not close to mansions, &c. The committee by its resolution sounds the death-knell to fines. The resolution goes to the lord of Dolcoath, and requests him to join the committee in its view that at the expiration of a lease there should be no fine; that if the lord desired the mine himself he should pay compensation for unexhausted improvements; and that referees, if necessary, should say what was reasonable in the granting to the company of a new lease. Whether there will be legislation or not in the new Parliament, it is patent from the tenor of this resolution, come to by the leading mining men of Cornwall, men of all shades of political thought, there will in future be no desire, as at Dolcoath, for 98,000*l*. as the "fine" for the renewal of a lease. The 98,000*l*. came to 25,000*l*. and an increased rate of dues, but there will be no 25,000*l*. in future.

A MEETING of the shareholders of Wheal Prussia and Cardrew (now abandoned) was held at the office of the pursuer (Mr. R. S. Teague), Redruth, on Tuesday. The accounts were presented, and showed liabilities due to the bankers and merchants amounting 572*l*. and it was resolved to make a call of 3*s*. per share, which will be sufficient to meet all liabilities. The pursuer and Messrs. Cornelius Bawden and T. Pryor were appointed a committee for the winding-up of the affairs of the company. The pursuer's salary having ceased some time since, the sum of 30*l*. was voted to him in consideration of his services, past and future, in reference to the winding-up of the company.



Share, Shares.	Stk.	Company Name	Par.	Cts.	Pr.
5000..	20..	Halia [L] .....	all..	25 1/4	28 1/2
40000..	5..	Bombay [L] .....	all..	6 1/4	7
10,000..	5..	Do, Ditto, New [L] .....	all..	5	5 1/2
280000..	Stk.	Brentford Consolidated .....	100..	220	225
16,000..	20..	British Gaslight [L] .....	all..	44	48
850000..	Stk.	Commercial Consolidated .....	100..	262	267
20000..	20..	Continental Union [L] Orig. all..	all..	42 1/4	43 1/4
20000..	10..	Do. do. New, 1869, 1872 .....	all..	29 1/4	30
10000..	10..	Do. do. 7 per cent. Preference .....	all..	22	24
23400..	10..	European [L] .....	all..	22	24
447620..	Stk.	Gaslight and Coke, A. Ord. ....	100..	237	240
681835..	Stk.	Do, 4 per cent. Deb. Stock .....	100..	109	111
5000..	10..	Hong Kong and China .....	all..	20	21
530000..	Stk.	Imperial Continental .....	100..	212	215
5300..	5..	Malta & Mediterranean [L] .....	all..	5 1/2	5 3/4
60000..	10..	Mel. of Melbourne p. c. Deb. all..	all..	108	110
098000..	10..	Do. 5 per cent. do. ....	all..	17 1/2	18 1/2
7.96..	40..	Monte Video [L] .....	all..	17	18
100000..	6..	Ottoman [L] .....	all..	8 1/2	9 1/2
300000..	5..	Oriental [L] .....	all..	23 1/2	24 1/2
37500..	20..	Rio de Janeiro [L] .....	all..	284	289
300000..	Stk.	South Metropolitan, A. ....	all..	284	289
350000..	Stk.	Ditto, 'ditto B. ....	all..	233	238



## Law Intelligence.

## SUPREME COURT OF JUDICATURE.

## THE COURT OF APPEAL—WEDNESDAY, DECEMBER 16.

(Before the Master of the Rolls, Lord Justice COTTON, and Lord Justice BOWEN.)

## PRICE AND ANOTHER v. THE PLASKYNASTON COLLIERY COMPANY.

This was the application of the defendants from the judgment of Mr. Justice Lopes upon a preliminary point of law raised in the action. The facts of the case were as follows:—The plaintiffs complained of the letting down of certain soil above some mineral property situate at Cefnuchan, near Ruabon, in the county of Denbigh. By a deed poll dated in the year 1840, the Crown made a grant of the surface in question to persons from whom it had ultimately devolved to the plaintiffs. But the same deed contained a reservation in the following words:—"Save and except out of this grant all mines, minerals, and quarries within, upon, or under the surface of the said lands or premises, or any part thereof, with full power to Her Majesty, her heirs, successors, and assigns, to enjoy them as fully and effectually to all intents and purposes as if this grant had never been given. The only document which was put in was that deed poll which contained the above reservation of the right to the Crown to let down the soil, and the defendant company also relied on a certain admission in the pleadings—that they were the owners of the mine. The defendants upon the above data contended that, although they did not prove their title, it was the legal presumption that they should have obtained possession of the mine to which their ownership was admitted by a rightful and intentional devolution of title from the Crown, as they could not have obtained a prescriptive title unless they had been in possession for a period of 60 years. The learned Judge, however, held that the burden of proof was upon the defendants, and it was for them to prove their title, which he considered they had failed to do, and therefore gave judgment for the plaintiffs.

Mr. Self, Q.C., and Mr. English Harrison were counsel for the appellants; Mr. Bosanquet, Q.C., and Mr. Poyser for the respondents.

Mr. SELF argued the case for the appellants, contending that it was the legal presumption that they had a proper title from the Crown for the reasons above stated. He cited, in support of his proposition, the case of "Love v. Bell" (9 Appeal Cases, House of Lords, page 286).

Their LORDSHIPS, without calling upon the respondents' counsel, dismissed the appeal with costs, and confirmed the decision of Mr. Justice Lopes. It was for the defendants, they said, to prove their title from the Crown, which they had not attempted to do (the Master of the Rolls said), for a very good reason—because they could not.

## HIGH COURT OF JUSTICE.

## CHANCERY DIVISION.—SATURDAY, DECEMBER 12.

(Before Vice-Chancellor BACON.)

## RE THE EAST HOLYWELL COAL COMPANY AND COMPANIES ACTS.

This was a petition for leave to reduce the nominal capital of the company. The learned counsel who made the application stated that the company was formed in the year 1876, with a capital of 600 shares of 150*l.* each; 130*l.* per share had been called up, leaving a liability of 20*l.* uncalled. The Articles contained a power to reduce capital by a special resolution, and that had been passed last month, was to the effect that it be reduced from 90,000*l.* to 60,000*l.*, and that such reduction be effected by cancelling the capital which has been lost on available assets to the extent of 50*l.* per share. That left the same amount still uncalled, and the nominal value of the shares would be 100*l.* each instead of 150*l.* The affidavit of the managing director stated that the amount of the capital which had been lost was equivalent to 50*l.* per share, and that the company had now abandoned two of their pits which had proved unprofitable. The VICE-CHANCELLOR granted the petition.

(Before Mr. Justice CHITTY.)

## RE THE ALLTAMI COLLIERY COMPANY.

This was a creditor's petition for the winding-up of the company. Mr. FOSTER COOKE for the petitioner stated that the company was formed for the purpose of working certain coal mines in Flintshire, but was now without doubt in an insolvent condition. His LORDSHIP made the order asked for.

## HOUSE OF LORDS.

The noble and learned lords present on Thursday morning were the Lord Chancellor, the Earl of Selborne, Lord Blackburn, Lord Watson, and Lord Fitzgerald. Their Lordships delivered judgment in the following case, which was standing over for further consideration:—

## THE DENBY MAIN COLLIERY COMPANY (LIMITED) v. THE MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY COMPANY.

This was an appeal from an order of the Court of Appeal reversing, with costs, so far as was appealed from by the respondents, an order of the Queen's Bench Division on a special case stated for the opinion of the Court in an action in which the respondents were the plaintiffs and the appellants were the defendants, and from another order of the Court of Appeal affirming, with costs, so far as the same was appealed from by the appellants, the order of the Queen's Bench. The action was brought by the respondents against the appellants to recover the sum of 2972*l.*, the balance alleged by the plaintiffs to be due to them from the defendants for the carriage of coal. The defendants, by their defence, alleged that the sums charged for carriage by the plaintiffs were excessive, and contrary to the provisions for equality contained in the statutes in that behalf, and by their set-off and counter-claim the defendants claimed a return of the difference between the sums they had paid to the plaintiffs in respect of the conveyance of all their coal along the plaintiffs' railways between the 14th of December, 1874, and the 14th of December, 1880, and the sums they would have had to pay during the same period if the plaintiffs had charged the defendants at the same rate which they charged other colliery-owners and coal dealers and other persons, and had allowed to the defendants the same drawbacks as those allowed to other persons, and had not unduly favoured the other colliery-owners, coal dealers, and persons. The defendants claimed the return of such difference on the ground that the same was an illegal charge and contrary to the provisions for equality contained in the Railway Clauses Consolidation Act, 1845, and the Railway and Canal Traffic Act, 1854; and that the plaintiffs, by charging the same, had subjected the defendants to an undue and unreasonable prejudice and disadvantage. The action was tried at the Winter Assizes of 1883 at Leeds, before Mr. Justice Denman and a special jury, when the matter was referred to Mr. Wills, Q.C., who, in accordance with the powers conferred upon him, stated a special case for the opinion of the Court, in which it was set forth that the defendants were colliery-owners, carrying on their business at the Denby Main Colliery, near Doncaster, such colliery being situated on the line of the plaintiffs' railway, which was the only line by which the defendants could send their coal to Grimsby, and that the plaintiffs had, in the case of other persons, made a reduction in their usual charge for the carriage of coal along the same portion of their line as that along which the defendants' coal was conveyed. It was held by the Court of Appeal that in the circumstances of the case no action would lie in respect of any branches of the provisions of the Railway and Canal Traffic Act, 1854, section 2. It was also held that where a railway company carried coal eastwards to various towns from a group of collieries situated at different points along their line, and charged one uniform rate to all the collieries, the easternmost colliery was not entitled to recover in an action for overcharges, inasmuch as the terminus of the transit over the company's line differed with respect to each colliery comprised in the group. In the case where the railway company had carried coal along the same portion of their line to Grimsby for

persons who shipped coal to the West Indies and to other ports at a reduced charge it was held that the defendants could not recover for overcharges, the termini of the transit from the collieries being different. Where, however, the coal had been conveyed from the defendants' colliery for other persons for shipment at a reduced charge it was held that the railway company had contravened the Railway Clauses Consolidation Act, 1845, section 90, but that the owners of the colliery had not proved any damage. It was further held that where the railway company had made a reduction in the charge for the conveyance of coal to certain persons in consequence of facilities provided by such persons for unloading, the owners of the colliery in question could not recover for overcharge, the circumstances of the cases being different.

Sir F. Herschell, Q.C., Mr. Littler, Q.C., and Mr. J. C. Russell, appeared for the appellants, the colliery-owners; the Attorney-General and Mr. Lofthouse for the respondents.

The case was argued last Session, when judgment was reserved. Their LORDSHIPS now delivered judgment, and affirmed the decision of the Court below as far as it related to the group rates, the defendants having failed to establish a case of favour or partiality to particular companies or persons; and, as far as it related to the allowance for facilities in unloading, their Lordships, however, thought that the defendants were entitled to recover overcharges in respect of coals carried for other persons over the same portion of the company's line to be shipped abroad, the proper measure of the overcharge to the appellants being the difference between the amount charged to them and that charged to the other persons for coals carried over the same part of the railway and under the same circumstances during the same period of time. The appellants having succeeded in only the smaller part of their case, each party would have to pay their own costs.

Judgment partly affirmed and partly reversed, each party to pay their own costs.

## THE COAL ARBITRATION CASE.

In the High Court of Justice, Queen's Bench Division, on Wednesday (before Mr. Baron Huddleston and Mr. Justice Wills, sitting as a divisional Court) the hearing of the case of Radford and Co. v. Lewis Merthyr Navigation Colliery Company (Limited) was resumed. The plaintiffs are Messrs. D. Radford and Co., coal merchants, of London and Cardiff, and the defendants are colliery proprietors in the Rhondda Valley. The dispute is about the price of coal to be supplied by the colliery company to the plaintiffs under a system of reference or arbitration, under which it was agreed that the referee should fix the price of coal for a period of 21 years. The arbitrator selected by the parties was Mr. James William Bowen, a barrister residing in Pembroke, and his decision as to the price of coal for the year ending September 30th, 1886, is the question now in dispute.—Mr. Bosanquet, Q.C. (with him Mr. Spokes) appeared for the plaintiff, in support of a rule to refer the award back to the arbitrator, in order that he might correct a clerical error.—The question was argued before their Lordships on Thursday last, when Mr. Upjohn appeared for the defendants, and asked for an adjournment of the case to give him an opportunity of cross-examining the arbitrator, and the plaintiff's solicitor, Mr. George Haynes Radford, with regard to an alteration of the figures which had been made in the award.—Mr. Charles, Q.C., now appeared for the defendants, and entered into arguments to support the position taken up by Mr. Upjohn.—Mr. Bosanquet ultimately suggested that the award might be referred back to the arbitrator, and after some discussion this suggestion was accepted by Mr. Charles, who stated that the new arbitration had also been agreed upon, and that it was further agreed that the new appointment should be permanent for the remainder of the period of the original agreement. Mr. Charles added that there was no imputation whatever at all made or intended to be made against Mr. Bowen. An order was accordingly made to refer the award to a new arbitrator.

## HEAVY FAILURE OF COLLIERY PROPRIETORS.

On Tuesday a petition for liquidation was filed in the Derby Bankruptcy Court, by Messrs. Mole and Stone, solicitors, Derby, on behalf of Thomas Henry and George Small, late proprietors of the Kilbury Colliery, near Derby, and now proprietors of Stanley and South Noranton Collieries. The liabilities are not yet fully ascertained, but they are believed to amount to between 20,000*l.* and 30,000*l.* The assets, on the other hand, are said to amount to only between 2000*l.* and 3000*l.*, but it is not clear whether this amount represents the total assets or only the amount which will be available for distribution among the unsecured shareholders. A receiving order has been made by the Court, and Messrs. Harrison and Co., accountants, had been appointed to assist the debtors in drawing up their statement of affairs. The Messrs. Small acquired the Kilbury Colliery about the year 1869, Mr. George Small having been the certified manager under the late owner, and they worked it with considerable success during the period of good trade and high prices. Latterly, of course, it has not been so profitable, but all along it has been considered a good property, the excellence of its coal commanding a higher price in the market than that of some neighbouring collieries. A long series of losses on the Stanley and South Noranton Collieries, together with several years' costly litigation, are the causes to which the debtors attribute their failure. In addition to several minor cases, the Messrs. Small have lately defended two serious actions, in which their costs must have been very heavy. The first of these in point of date was brought by Mr. Drury Lowe, proprietor of the Denby Colliery, who claimed 1800*l.* from the debtors for alleged breach of contract, as the proprietors of Kilbury, in neglecting to pump the water out of their pit, and so preventing it from flowing to Denby, which lay on the low side of Kilbury, and to do which he paid the Messrs. Small the sum of 725*l.* per annum. This action was referred to Mr. C. M. Roupell, official referee, and Mr. Jeffcock, of Sheffield, as assessor, and is not yet concluded. The hearing was commenced in March, 1884, and has been continued on 52 days since at various periods. Counsel on each side summed up their case in September last, but up to the present judgment had not been delivered, owing, it is understood, to the illness of the referee. The other action was by Mr. R. S. W. Sitwell, who claimed 3000*l.* for rent of a coal field at Horsley. This case was referred to Mr. Anderson, Q.C., and lasted 14 days. The defendants admitted the claim, but set up a counter-claim of 10,000*l.* for loss of profit on certain pillars of coal which was reserved by the ground landlord for the support of the church and other buildings on the surface; and also for loss of profit through certain portions of the coal field being found to contain old hollows, the debtors contending that under the lease they ought to have found coal in the whole of the area rented. Judgment was delivered in this action about a month ago, when a verdict was given for the plaintiff on both the claim and counter-claim. In addition Mr. Lowe sued the Messrs. Small at the Derbyshire Assizes for the rent of Stanley Collieries, and they again set up a counter claim for a return of the rent paid. The case was adjourned owing to an objection by defendants' counsel as to the non-production of a document, but on its coming on again in London last week the defendants allowed judgment to go by default, and a verdict was given for Mr. Lowe on the claim and counter claim, with costs. It is understood that that gentleman was instituting another action against the debtors for trespass into Denby Colliery, evidence of which is stated to have been obtained during the trial of the action for breach of contract. The Midland Railway Company are creditors for a large amount for freight, and an execution put in by them was the immediate cause of the filing of the petition.

At the Bankruptcy Court, on Tuesday, the case of Baron Albert Grant was before Mr. Justice Cave, upon an application in reference to the purchase of tin mines for company purposes. The debtor, the well-known financial agent of Lothbury, recently failed, and among the proofs tendered against the estate was one made by Mr. E. Hawkins, a metal broker, of St. Benet's-place, E.C., for 5000*l.*, being commission agreed to be allowed to him by Baron Grant, upon the latter purchasing the Crookshank Tin Mines, in Australia, for company purposes, payable in shares. The property

was sold for 10,000*l.*, and a company was to be formed with a capital of 100,000*l.*, of which 20,000*l.* was to go to the purchaser, 55,000*l.* to Baron Grant, 20,000*l.* to be working capital, and 5000*l.* was to be paid to Mr. Hawkins. Eventually the failure took place, and Mr. Hawkins tendered a proof for 5000*l.*, being the money value of the shares. The proof was rejected, and the present motion was made to reverse that decision.

Upon the case being called Mr. SIDNEY WOOLF, on behalf of the trustee, said that an arrangement had been come to by which the proof was to be admitted for 800*l.*, without costs.

Mr. BIGHAM, Q.C., and Mr. HORACE BROWN, for the creditors, consented.

Order by consent accordingly.

## THE BUTTY SYSTEM AGAIN.

At the Burslem County Court, on Monday, before his Honour Judge Jordan, Earl Granville, of the Collieries, and two butty colliers, named Joseph Forrester, sen., and Joseph Forrester, jun., were sued by the widow and six children of George Hall, deceased, for compensation under the Employers' Liability Act, 1880.

Mr. Richardson appeared for the plaintiffs, Mr. Paine representing Earl Granville, and Mr. Haden Corser appeared for the two Forresters.

The plaintiffs claimed 234*l.*, under the Employers' Liability Act, as compensation for the death of George Hall, caused by a defect in the works of the defendants, and by the negligence of a servant in their employ; and they likewise claimed at common law 50*l.* damages, sustained by reason of the death of George Hall, resulting from the carelessness of the defendants or their servants, and the breach of statutory duties imposed upon them by the Mines Regulation Act, 1872.

On behalf of the plaintiffs it was stated that the deceased, George Hall, was formerly employed at the No. 1 Race-course Pit, belonging to Earl Granville, and which was worked by the two Forresters on the butty system. On the morning of the 16th December, 1884, he descended the pit shortly before six o'clock, and proceeded to a dip where he was engaged in holing. By reason of an influx of water he was unable to commence work, and for about an hour he assisted a man named Johnson in pumping the water out of the dip. Directly after the deceased entered his working place a fall of roof occurred, injuring Hall so seriously that he died at 10 o'clock the next morning. It was pointed out by the 16th General Rule, which forms part of the Act, the duty of maintaining the roads, levels, working places, &c., in proper order, devolved upon the colliery-owner, or some person appointed for that purpose, and that John Forrester, fireman, was the person so appointed; and it was contended that the fireman had been guilty of negligence in not reporting the roof of Hall's working place to be unsafe, and in failing to see that it was made secure.

The only witness called for the plaintiffs was PAUL JOHNSON, who deposed to the deceased helping him to pump the water from the dip, and to the fall of roof occurring as soon as Hall entered his working place. He denied that there was any chalk mark on the roof indicating where a prop ought to be set, and said that after the accident he and the fireman fetched some timber, and the latter put in a prop.

In reply to his HONOUR, Mr. J. LUCAS, general manager of Earl Granville's collieries, said the pit in question was worked by the two Forresters, who appointed their own fireman, subject to his approval. It was the duty of the fireman to have made an entry in the report book as to the part of the pit he inspected on the morning in question, but he did not appear to have done so, or made any entry beyond the fact that Hall was hurt.

The JUDGE having intimated that there was no evidence against the butties, Mr. PAINE submitted that there was no case against Earl Granville.

His HONOUR said it was alleged that there was negligence on the part of John Forrester, the fireman, a person in superintendence, in not seeing that the roof was safe; and also that there was a defect in the works by reason of the roof not being secured.

Upon this Mr. PAINE called evidence to show that when Hall's working place was inspected on the morning in question the fireman marked the roof where a prop was required. He subsequently met the deceased, and told him not to commence work until this order. Hall, however, not only failed to put in the prop, but removed some ironstone, thus causing the fall of roof, and contributing to his own injury and death. After the accident Hall admitted that it was entirely his own fault.

In cross-examination the witnesses admitted that at the inquest on the body of Hall they never said a word about deceased admitting that it was his own fault.

Mr. PAINE called the Judge's attention to the 43th special rule of the colliery, which required workmen to set sprags, props, &c.; but Mr. RICHARDSON contended that in face of the 16th General Rule that was *ultra vires*.

His HONOUR said it was a most delightful muddle. The general rule, forming part of the Act, put it upon the owner to see to the safety of the roofs and working places, while the special rule framed by the owner in pursuance of the Act put it upon the workman. A question of law of great gravity was involved in the case, and therefore he must take time to consider his judgment. It appeared to him that so long as the butty system prevailed in North Staffordshire so long would these accidents go on. They jumped about from day to day, first one taking the duty of fireman and then another, and probably sometimes they had no fireman at all. However, the supervision intended by the Act was frittered away, and there was practically no protection of the lives of the workmen so long as the system continued. Colliery-owners would continue to incur heavy expense, and these accidents would happen, until some recognised person was appointed to inspect the mines in the interests of the mineowners themselves.

Judgment deferred until the 4th proximo.

## THE RHONDDA SHOT-FIRING CASE.

At the Pontypridd Police Court, on Wednesday, the long-adjourned and now famous case of shot-firing (that is to say, firing shot in a colliery while men were at work), in which Mr. John Thomas, manager of the Standard Colliery, Ynysyhir, was the defendant, and the Home Office, represented by Mr. Thomas Williams, Merthyr, was the prosecuting authority, came on again before the magisterial bench, which was composed on this occasion by Mr. Ignatius Williams, stipendiary, Mr. Blandy Jenkins, Rev. D. W. Williams, M.A., Mr. Evan John, and Mr. C. Bassett. Mr. Simons, Merthyr, appeared for the defendant. The case had been decided against the defendant, but a case had been stated afterwards and, virtually dismissed.—Mr. Williams said that the officials of the Crown had positively refused to enter an appeal, and compliance should now be made with the order of the Court.—Mr. Simons urged that the case was not one for costs, as it was a "test" one.—Mr. Williams suggested that the penalty imposed upon defendant should be 10*l.* As a reason he said that there could be no appeal unless the penalty reached that sum.—Mr. Simons: I do not care about that.—Mr. Williams: I am simply calling the attention of the magistrate to the fact that there must be a penalty amounting to half the maximum penalty before there can be an appeal.—Mr. Simons: I trust your worship will withhold that question until there is an appeal.—Mr. Williams: The Treasury simply asked me to come here and ask the magistrates to carry out the order.

The Stipendiary said it appeared to him that the Higher Court had directed him to convict with costs. That was simply the costs of appeal.—Mr. Simons: They have no jurisdiction to give this direction at all.—The Stipendiary (to Mr. Williams): You do not press for costs, do you?—Mr. Williams: Oh, yes I do. Only under very exceptional circumstances is it that the costs do not follow the conviction.—Mr. Simons: Why, in this case there was a point of law upon which there was a doubt, and I have the admission of the Home Office. Why should we be put to costs if the question is to be settled for the benefit of the public?—The Stipendiary said he could see the force of that point. But one was anxious to take every possible hint from the Superior Court, and the Superior Court said that the appellants



ought to be put to the costs of the appeal. He then mulcted the defendant in the sum of 17. fine and costs.—Mr. Simons expressed dissatisfaction.—Mr. Williams: The costs will not be very much, Mr. Simons.—Mr. Simons: Why, the appellant is grossly aggrieved by the whole of the proceedings of the Home Office.—The Stipendiary: You are quite entitled to your opinion.—Mr. Simons: A large trade—a concern in which a large amount of capital has been invested—has been harassed by the whims of two or three people.—The Stipendiary: You are quite justified in making that remark.—The total cost will, it is conjectured, be 200l.

#### THE CHONTALES COMPANY (LIMITED).

The following is the directors' report:—The directors beg to submit to the shareholders the audited accounts of the company for the 12 months ending June, 1885. During that period the mining operations have been exclusively confined to opening up the San Antonio Mine, and it was not until the month of May that any ore was crushed, hence the small amount for gold credited in the profit and loss account. The operations at San Antonio Mine have been carried up to a point immediately underneath the old workings in Mr. Belt's time and the acting manager reports a good lode in the back of the level where stoping has recently commenced. No doubt as soon as communication has been effected with the surface the ventilation will be sufficient to admit of a larger staff being employed in this part of the mine, and consequently more ore may be then expected to be crushed at the mill. It would appear, from the statements of Mr. White (the manager), that there are two lodes in the San Antonio Mine, and that the lower workings are carried on upon a different lode to that worked by Mr. Belt some years since. This being so, it will add materially to the prospect of profitable results, and the San Antonio Mine may yet produce sufficient funds for opening up other mines. At the same time the directors consider it would be imprudent to rely on such a possibility for pursuing the lode in the eastern part of Consuelo Mine, known as Consuelito, and they would, therefore, suggest to the shareholders whether, in their own interest, they ought not to subscribe sufficient capital for this purpose. On the 16th June last, a meeting of the shareholders took place, when Mr. White attended, and fully explained the operations and prospects at the mines. By a vote then taken it was decided to raise the sum of 5000l. for the development of the Consuelito Mine, but the best means of raising this amount was deferred until after the principal shareholders had been consulted, and the meeting was adjourned with that object. The directors communicated with 47 of the largest shareholders on the subject, and received 15 replies, the majority being in favour of issuing ordinary shares at a discount, but the amount of support promised was so utterly inadequate to supply the required amount, that no further step in that direction has, up to this time, been taken. The directors are, however, of opinion that the time has arrived when this additional sum should be secured, and Mr. White supplied with adequate means for developing the Consuelito Mine; they, therefore, hope the shareholders present at this meeting will bring the question to a practical result by determining the manner in which this capital should be raised. As to following the Consuelito lode into the Consuelito property, the manager expresses his belief that such an enterprise is well worthy of trial, and if a deposit is found in that property similar to the rich bunch worked upon in Consuelo Mine, it will enable the company to return in dividends a large percentage of the capital. In their last annual report the directors drew attention to the opinion expressed by Mr. White as to the probable result of opening up the ground to the east of Consuelo Mine, and with the conviction on their minds that this is the proper course to pursue, they feel that they cannot do better than again refer to the letter written by Mr. White in November, 1884, from which the following is an extract:—"If we found the shoot in Consuelito equal to that in Consuelo, we should soon pay back the capital subscribed for driving the level, and there are only about three miles in the whole world that I can think of now which would exceed us then in making profits, for our profits would be really immense from a rich shoot like at Consuelo when working in whole ground; we should have no extra cost as our machinery is on the spot, and everything for mining and returning the ore in complete order. But deposits of rich ore are generally found to be far apart, and there may be some payable ore between, yet I cannot think it would be advisable to do anything more at Consuelo, or go to any further cost preparatory to working the Consuelito Mine, without capital can be raised, so as to give that mine a fair chance for the discovery of another shoot. I calculate that the total cost for driving the Consuelo main level a thousand feet into the Consuelito Mine would be about 5000l., and take two years to complete the work." Arrangements have been made with Mr. White for returning to the mines by the Royal Mail Steamer sailing on the 31st December. It rests with the shareholders to say whether they will furnish him with the necessary funds for attacking Consuelito lode, or whether his operations shall be confined to the prosecution of the workings in San Antonio, and those in Trinidad contiguous to them. This latter course the directors feel bound to add is not that which commends itself to their judgment. In Mr. White the directors consider that the company has a skilful and efficient officer who will conscientiously discharge, as hitherto, his duties as manager, and do his utmost to promote the prosperity of the company. The directors retiring at this meeting are the Right Hon. the Earl Nelson and Samuel Loveless, Esq., who, being eligible, offer themselves for re-election. In consequence of the illness of the auditor appointed by the shareholders at their last meeting, the directors have, in accordance with the company's Articles of Association, appointed a substitute by asking Messrs. Chatteris, Nichols, and Atkins to audit the accounts for the past year, and the shareholders at the annual meeting will be asked to appoint an auditor for the ensuing year. The directors trust the shareholders will endeavour to attend the meeting, but in the event of any shareholder being unable to do so, a proxy is enclosed for signature and return.

WEST SETON meeting was held on Thursday. It was the most cheering, financially, of the meetings held during several years past. The drain on the pockets of shareholders here has been for a long time continuous. The loss reported, however, was comparatively small—some 565l.; and had not Captain Rutter to cope with a fall of ground in the 226 the loss would have been insignificant indeed. The call was 5s. per share, and Captain Rutter, slow to promise, hopes to increase the returns next time.

**GOLD AND SILVER.**—Messrs. FIKLEY and ABELL write under date December 17: Gold: The demand for the Continent has so far fallen off that there have been but few withdrawals of bars from the Bank for Germany, the amount taken for that quarter being only 44,000l. On the other hand, very large sums in sovereigns have been taken out for shipment to South America, Canada, Malta, and Egypt; the total so disposed of being 570,000l.; 69,000l. sovereigns, from Australia, and 5,000l. in sovereigns from India have been sent in. The Neva has taken 100,400l. to the River Plate, and the P. and O. steamer 9,000l. to India. Silver: Bars have further declined, transactions having taken place during the week at 47½d., 47¼d., and 47½d. until today, when purchasers were disinclined to act in the prevailing uncertainty which exists as to the legislation on the Bland Bill that the last quotation is purely nominal. The arrivals comprise 30,000l. from New York, 25,000l. from West Indies, and 69,000l. from Chile; total, 124,000l. The P. and O. steamers have taken 109,500l. to India.—Mexican Dollars: Have participated in the decline with bar silver, and from 46½d. our last quotation, have today touched 45½d. per oz., at which rate the balance of those which were unsold at the time of the arrival of the French steamer, was placed today. This vessel brought about 130,000l. from Vera Cruz.—Exchange: The following sales were yesterday effected by the India Council: By tender—Bills on Calcutta, Rs. 2,00,000, at 1s. 6 1/2d. per rupee; bills on Calcutta, Rs. 1,00,000, at 1s. 6d.; bills on Bombay, Rs. 15,00,000, at 1s. 6d.; bills on Madras, Rs. 2,00,000, at 1s. 6 1/2d.; bills on Madras, Rs. 45,00,000, at 1s. 6d. Transfers on Calcutta, Rs. 1,00,000, at 1s. 6 1/2d.; transfers on Calcutta, Rs. 1,00,000, at 1s. 6 1/2d. Special allotment transfers on Madras, Rs. 1,00,000, at 1s. 6 1/2d. Tenders for bills, at 1s. 6d., and for transfers at 1s. 6 1/2d., and above, will receive in full. The amount for next week is again 35 lakhs. Today's Indian wire rates are:—1s. 5 1/2d. for both Bombay and Calcutta, while from China for four months' Bank bills, 2s. 4 1/2d. Hong Kong; and 4s. 7 1/2d. Shanghai, are quoted.—Quotations for bullion: Gold: Bar gold, fine, 77s. 9 1/2d. per oz. standard; bar gold, containing 20 dwts. silver, 77s. 11d. per oz. standard.—Silver: Barsilver, fine, 46½d. per oz. standard; bar silver, containing 5 grs. gold, 47½d. per oz. standard; cake silver, 5 1/2d. per oz.; Mexican dollars, 45½d. per oz. Quick-silver, 6 1/2d. to 6 1/2d. Discount, 3 per cent.

#### EL CALLAO GOLD MINING COMPANY (LIMITED).

To persons acquainted with the history and present position of this company it must appear extremely strange that its shares should remain comparatively neglected at a time when general attention is again directed to gold mining ventures. Under the influence of most encouraging results quite recently achieved by the Mysore Company, Indian gold mines of almost every class and description, which had for a prolonged period enjoyed the sweets of well-earned repose, have suddenly emerged from oblivion; their existence has been brought to the recollection of a market sick with inactivity and eager for an opportunity to make money; their shares, delivered from the dark dungeons of a tin prison, once more see the light of day, and even command a high premium. But how is it that, in the midst of the boiling excitement, in the height of the fever—when shares that have never returned a cent are being bought up with trembling haste—a gold mine that since 1874 has paid no less than 106 dividends, to an aggregate value of 1,366,568l. on a capital of 1,288,000l., is overlooked, and its stock allowed to remain at a small premium of 25 per cent. of face value? There are three reasons which explain, though they do not justify, this comparative neglect. The company is not an English one; its shares are heavy, being of 1000 bolivars, or 40l. apiece, fully paid; they are not officially quoted, and consequently are but little known to the market and to the general public. To the first of these objections, it may be urged that the undertaking should be judged by its results, extending over a period of many years, and that "for the convenience of the European shareholders, agencies have been established in London (Messrs. Baring, Brothers, and Co.), Paris (M. Louis Roux), and Hamburg (Mr. Ernesto Hahn), where a provisional register is kept for the transfer of shares, and dividends are paid to all holders whose shares are registered with them." The second objection is one of a purely market character, and must, to a certain extent, militate against a rise corresponding to that on low-priced stock, until it may be decided to subdivide the shares into smaller denominations. The third objection is one which, it is reasonable to suppose, will ere long disappear. It is never our purpose to raise in the minds of our readers visions destined to fade with a cruel awakening; and when we take upon ourselves to draw their attention to the Callao Company we would bid them recollect that, however brilliant may have been its record during the past decade, it represents a purely mining enterprise, with all its attendant risks and chances, to be duly weighed and considered by such as may feel disposed to embark their money therein. We are inclined to think, however, that the recital of a few unvarnished facts in connection with so successful a concern cannot fail to be of interest at the present juncture to many who, attracted by the glitter of the quartz, yet desire to feel some reasonable assurance of a return on the capital which they may elect to sink.

The El Callao Company was organised in 1871, and for the first four years of its existence no dividend was paid, although 41,540 ozs. of gold were obtained from the mine, realising about 144,000l. In 1875 the output was greatly increased, the profits enabling the board to make several distributions to the shareholders. Since that date, in spite of many alternations of fortune, no single year has passed without results sufficient to justify more or less handsome returns on the capital; indeed, the yield during later years reached phenomenal proportions, culminating in 1884, when 177,055 ozs. were obtained from 30,936 tons of ore milled, being at the average rate of over 5½ ozs. of gold to the ton, and allowing of the payment of 30 per cent. in dividends for the 12 months. Since the commencement of 1881 it has been customary for the company to pay monthly dividends regulated by the profits realised, a mode of distribution which should tend to popularise the security when the public have become more familiar with its name and intrinsic merits. The following table will show in most lucid fashion the results achieved from the company's foundation down to the end of 1884. The bolivar is equal to 1 fr. The capital consists of 32,200 shares of 1000 bolivars each fully-paid, and there is no debenture debt of any kind whatever:—

Product of the mill of El Callao Mining Company since its construction, and of dividends paid:—						
Years.	Tons of ore milled.	Gold. Ounces.	Value in bolivars.	Num-ber of divi-dends.	Dividends per share of present capital. Bolivars.	Bolivars.
1871...	515	3,219 50	278 5 13	—	—	—
1872...	2,310	8,826 67	712 3 18	—	—	—
1873...	3,054	12,308	1,053 8 38	—	—	—
1874...	3,963	17,187 68	1,544 5 20	—	—	—
1875...	11,859	31,273 83	3,048 6 40	5	20	644 7 00
1876...	12,419	42,542 05	4,169 2 55	11	53	1,776 6 30
1877...	11,685	48,168 58	4,778 8 92	7	52	1,674 4 00
1878...	9,873	49,838 8	4,892 5 18	7	36	1,159 2 00
1879...	11,894	40,308 51	3,837 12 68	6	26	933 8 30
1880...	18,624	54,033 71	5,231 7 23	11	46	1,481 2 50
1881...	24,978	72,254 42	6,970 2 19	48	58	1,833 2 00
1882...	22,405	103,398 08	10,150 5 84	12	154	4,988 8 00
1883...	27,866	134,362 64	12,941 6 89	12	189	6,081 8 00
1884...	30,936	177,055 16	17,076 1 10	12	300	9,500 0 00
191-891 .....	756 581 80	76,725 0 10	95	935	3,107 0 00	

The enormous expenses incidental to mining in Venezuela are the one great difficulty against which the Callao, in common with other companies that owe their origin to its unparalleled success, has to contend. In one respect it may be said, paradoxical though it appear, that the extreme richness of the Callao lode has been a misfortune for the company, inasmuch as it has undoubtedly led to the neglect of economic considerations in the working of the mine. But determined efforts have for some time past been made, with no little success, to reduce the expenditure, and to bring it within the bounds prescribed by sound management. Thus, whereas the cost of mining, milling, and general expenses at the mine was formerly about 200 fr. per ton, it had been brought down to 153 40 fr. in 1884, and we are led to understand that a very considerable further reduction has been effected during the present year. To this result the erection of a new and improved mill has greatly contributed. The importance of the point cannot be over-rated, seeing that all veins are subject to variations, and it is incumbent on the administration so to restrict expenditure as to ensure to the shareholders a fair profit on the working even in years of comparative depression. For the Callao lode is no exception to the rule; its yield even in recent years has varied considerably. In 1881, for instance, only 2 89 ozs. per ton were obtained on an average, whilst in 1882 the return averaged 4 7 ozs.; in 1883, 4 86; and in 1884, 5 72. In October, 1884, a contraction of the rich "pay shoot" occurred, and the yield per ton again materially diminished. The monthly production of gold reached its lowest expression in June, 1885, when only 5250 ozs. were realised, and the dividend fell to 4 fr. per share. No sooner, however, had the new mill been got into working order than the returns were doubled, and over 10,500 ozs. per mensem have since represented the minimum yield on an increased output of ore. Though these returns would permit of a monthly dividend exceeding 12 fr. per share, payments have for the last five months been limited to that figure, in conformity with a resolution passed by the board on July 27th, 1885. The object of this decision was to replenish the reserve fund of some 30,000l., which had been expended for the purpose of transforming the titles of the company in compliance with the requirements of the new mining laws of Venezuela. We hear upon good authority that the title deeds are now assured in perpetuity. It is

intended to resume payments regulated by the monthly returns so soon as the reserve shall have again reached 30,000l. This, it is asserted, will have been attained by the end of the year, and there will probably remain a surplus in hand available for immediate distribution as a bonus to the shareholders. A great deal of exploration work has been conducted during the year, and is still going on, the management expressing itself fully satisfied with the results of this temporarily unremunerative expenditure. Our readers may have noticed in our issue of the 5th instant a translation of the official report published in September last, in which the board state their belief that, barring unforeseen unfavourable changes, the company "will from next July onward show more brilliant prospects than it ever has done yet." We are in no position to endorse so boldly sanguine a view, though we may, perhaps, in a succeeding number be able to offer some independent testimony of value respecting the present appearance of the mine and the prospects for the future. But there seems little reason to question the probability of the company continuing to pay handsome dividends for an indefinite period; and it is not too much to say that, were the stock subdivided into 1l. shares, these would, under present circumstances, command a high premium. The market value of the shares, which is somewhat a matter of negotiation, stands at about 50l., upon which dividends at the rate of 12 francs per mensem only would yield 11½ per cent. per annum. There are no transfer charges to pay. The delivery of the shares is made by endorsement, with letter of advice to the company, forms for which are obtainable at Messrs. Barings. The certificates are retained by the purchaser, and the letter of advice is lodged with the above-named firm, who in due course issue the dividend warrants to English holders. We entertain the opinion that this security may be considered a thoroughly good mining venture, with prospects of much higher values in the near future.

#### WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

In the year 1851 there was a mania for gold mining in California. In 1852 it extended to Australia, and the premiums to which many companies advanced was something enormous. The total represented about 3,000,000l. sterling. The first Californian mine brought out—the Agua Fria—reached 300,000l. premium. Others followed in quick succession, and promoters reaped a rich harvest indeed. We stood almost alone in cautioning the public against the enormous prices charged for many of them—all of speculative, and many of the wildest character. But it was of no use, the fever still raged, and—in 1853—since Californian companies stood at a market value of 1,415,000l., and Australian at 1,285,000l., and writing upon them in the annual "Progress of Mining" for 1852, we added—"Of these schemes in general I never had but one opinion, and only regret a tithe of the money had not been laid out in bona fide mining at home. It is, however, impossible to make many persons believe that mining in England is a legitimate undertaking; but introduce to their notice any scheme at the Antipodes, brought out with good names in the City, but by men who know as much about mining as the man in the moon, and they open their purses freely enough." Now, this gold mania ended in a total loss exceeding 3,000,000l. sterling. When the panic succeeded to the fever that has lasted so long there was such a rush to sell out that at last shares could scarcely be given away. It was "devil take the hindmost," and ended in the ruin of many individuals. Well, we are asked, "Will history repeat itself?" We fear it will, for the mania surrounding Indian gold mines is beyond anything we can remember of 1851 and succeeding years. Mysore is no doubt a fine property, and under good and honest management, but there are 134,900 shares in the company, and the present price is over one million sterling. In many of the smaller fry, where dealings take place every day to the extent of thousands, and at differences of 1d. and 1½d. per share, the shares are mere counters for gambling, and the usual results will follow. In the meantime, amid the mad excitement it is almost useless asking any one to go into bona fide legitimate concerns at home. We shall stick to them nevertheless.

In writing, as we have done, let it be understood that we do not condemn, or have any right to condemn, bona fide Indian mining. But there is a vast difference between mining and mere gambling in shares, and the latter too often destroys the name and character of the former. Even since our remarks above were written instances have occurred to illustrate them. At the end of last week Mysore shares left off 5l. each, having risen from 2s. 6d. Early in this week they rose to 8l., at which price it is said large purchases were made. Then, almost as suddenly, shares dropped to 5l. That is to say, the mine depreciated in market value over 300,000l. in three days without any change in the position or prospects of the mine. What do those who gave 8l. per share say to this? Again, Indian Consolidated shares rose to 1l. 12s. 6d. After the meeting and the good news imparted they dropped 10s. per share, or a market depreciation of the property nearly 300,000l. The wires are pulled by "bulls" and "bears," who know nothing and care nothing about legitimate mining.

At South Condurrow the levels driving east are now approaching the rich "pipes of tin" that were passed through in Wheal Grenville 150 fm. level, and which it is hoped will hold up into South Condurrow. The most advanced end is the 80, and this in a tin ground valued at 12l. per fathom. Above this is a large extent of unexplored ground.

The sale of lead at D'Eresby this week, 12 tons, fetched 8l. 6s. 6d. per ton. The last sale brought 7l. 13s. 6d., thus showing a good advance in ore. The 12 tons blende brought 2l. 3s. per ton. The last price, in May, was 1l. 12s. 6d.

Although Wheal Crebor has only divided 1s. per share or 600l. during the present year, the mine made an actual profit of over 1000l., allowing for the sum put by in the 13th months' cost, and this profit was made from copper at its very lowest price.

The agent reports that in the tribute pitch in new discovery at Langford the lode is 2 ft. wide, with a leader 6 in. wide, yielding good work for silver ore, and lengthening as it goes up. A sample of the ore from this leader has been assayed by Mr. Harvey, of Truro, and yields 354 ozs. to the ton. Several portions of lodestuff have also been assayed, yielding 12½, 18½, and 28 ozs. of silver to the ton. We may, therefore, reasonably look for a good thing here, especially as the lode seems to be in whole or unwrought ground.

The tin sale at Metal and Flow for this month realised 174l. 14s. 9d., and a profit on the current costs. The returns will now go on increasing.

The shaft at East Blue Hills is now down to the 30, and the lode will soon be cut into.

The directors of the United Mexican Mining Company have received the following telegram:—"The excess of returns over outlay on the mine of San Cayetano de la Ovejera for the week ending December 12, is \$2769; Santa Monica, \$1044; El Diamante, \$132. Holidays.



## THE APATITE OR PHOSPHATE MINES OF CANADA.

This is a common mineral in the limestones of the Laurentian rock, sometimes disseminated in minute blue or green crystals, and at other times so abundant as to make up a great proportion of the rock, and in some cases to form beds of a nearly pure crystalline apatite. Of late years the increasing demand for phosphates as fertilisers of the soil has drawn attention to the use of this mineral in a prepared form, and the large supplies existing in Canada are now receiving considerable attention. In the "Geology of Canada" the apatite deposits of the district lying back of Kingston are described as beds. Dr. Sterry Hunt, in his early reports of 1863-6, when attention was first called to the existence of this mineral in Canada, stated that though it did occasionally occur in beds, the workable deposits were "with few, if any, exceptions confined to the limestones." His reasons for regarding most of the deposits as concretionary veinstones depended upon such facts as "banded structure," the "presence of drusy cavities," and the rounded forms of certain crystals, indicating, as he styles it, "a process of partial solution succeeding that of deposition." Professor Harrington says in his report on the apatite district of Ottawa, as a rule the apatite-bearing veins are characterised rather by "a want of regularity or order in the arrangement of their constituents than by any degree of symmetry." Instances do occur, however, where they show a banded structure. Veins with sharply defined walls, as in metaliferous lodes, are rarely seen, the vein and counter rock merging into each other. Dana says such a blending of a vein with the walls is a natural result when its formation in a fissure takes place at a high temperature during the crystallisation of the containing rock. Dr. Sterry Hunt regards many of the apatite veins as fissures or cavities which have been filled by the deposition of materials derived from the adjacent strata. In reply to the question so often put "what is the nature of phosphates, and how have they been formed," it may not be out of place to mention the two sources of supply given by Dr. Dawson, an eminent authority on this point—the concentrated deposits of phosphatic matter known as guanos, which form two subdivisions, nitrogenous and phosphatic, such as the bird excrements occurring only in the exceptionally dry climates of the South American coast, and the crystalline deposits of Canada, Norway, and elsewhere. In the nitrogenous phosphates the organic matter converted by decomposition into ammonia salts remain as part of the mass. In phosphate guanos the rain has removed the soluble ammonia salts, but has left the phosphatic material. This class of guanos is met with in the West India Islands, and Dr. Dawson thinks the deposits in the South of France known as Bordeaux phosphate are of a similar nature, and may be also traceable to mussel mud, or the accumulations in shallow tidal estuaries of molluscs and other marine organisms. Coprolite beds, such as those of the eastern countries of England and of South Carolina, have resulted from concretionary action, the slow process of drawing together of like particles in the mass, fragments of shells, bones, &c., serving as a nucleus, and when the material is abundant such concretions coalesce, and form layers. The word coprolite, however, should be confined to the fossil excrements existing in abundance in certain localities on the eastern coast of England of various animals, notably the saurian monsters of the antediluvian shores. In the Laurentian rocks of Canada, says Dr. Dawson, are a great volume of sediments deposited in the earliest ocean of which we have any trace, but which originally, resembling those of later seas, have been so completely altered that their materials have entered into new combinations, and have become entirely crystalline, resembling now the original deposits as little as do the crude ingredients of glass the finished product. There can be no doubt of the original sedimentary origin of these Laurentian rocks, mussel muds, sands, and coprolite layers being changed by volcanic or igneous action to wholly crystalline rocks. To substantiate this it is shown how limestones thus acted on would assume a crystalline character as marbles, beds of a peaty or coaly nature would pass into crystalline carbon or graphite, and phosphatic layers would appear as crystalline calcic phosphate or apatite. All these substances are found in close contiguity in the Ottawa district, an evidence pointing directly to the correctness of the theory. The greatly disturbed character of the Laurentian rocks explains the great irregularity of the apatite deposits, layers, and veins, which may before the great folding and kneading together of these rocks have possessed regularity and uniformity, but through excessive disturbance have been dislocated in every sense, leading to the production of large pockets and irregular masses connected only by narrow and twisted seams, they may even appear to occupy completely isolated portions. The broad zones containing workable deposits of apatite and intervening belts offering little encouragement for the miners are shown in a map published by the late Mr. Vennor in the Geological Survey Report of 1876-77, and a reliable clue is thus given to proprietors where to direct their researches.

Mr. Torrance, lately on the Geological Staff, states that the heaviest apatite deposits lie along the valley of the Lievere, but proceeding eastward or westward from this river the deposits become more and more mixed with calcite, until they finally cease to be profitable for mining. The various forms in which apatite presents itself in the Ottawa district are as crystals sometimes of large dimensions in masses varying from compact to coarse granular, in strata of a lamellar texture, and in a friable variety which is abundant, known as "sugar phosphate." The latter on account of its friability is much easier to grind than the compact masses, but is more apt to undergo loss in handling. This could be obviated by barrelling, or by putting it up in coarse bags. The colour varies, being various shades of green, blue, red, and brown of different shades, yellow, and white. Hofmann, the analyst of the Geological Survey, says that from its usually high percentage of phosphate of lime, Canadian apatite may be regarded as a most eligible material for the manufacture of superphosphate. Generally speaking it contains only small quantities of oxide of iron.

ONTARIO.—In his report on the county of Hastings Mr. Vennor, of the Geological Survey staff in 1871, called attention to large workable deposits of phosphates existing there that had been quarried on and off for over 20 years, which he denominated as "the North Burgess Phosphate Basin," and "the Bedford, Storrington, and Loughboro Basin." The former of these extends through the townships of North Burgess, South Crosby, and Bedford, and was found to have a thickness of from 2600 to 3000 ft., forming a belt or zone, running from the north-east to the south-west corner of Burgess, south-westward through Crosby; the latter runs through the south-east corner of Bedford township and on through the townships of Storrington and Loughboro. The width of basin is about 6 or 7 miles, and narrows in places to half that width. The available deposits of phosphate appear to occur towards its outer side. The richest deposits of this mineral occur in the townships of North Burgess, where a large number of phosphate mines, or "openings," are worked with very fair returns. Of these, 145 in number, are described in Mr. Vennor's report. (Geological Survey, 1873-74.) Phosphate is met with, more or less, all through the district lying north of Kingston and Belleville, and analyses made from specimens taken in different localities gave on an average 88 per cent. of phosphate of lime.

QUEBEC.—The Laurentian mountains of the province of Quebec seem to offer greater advantages than elsewhere for mining this

mineral, especially in the Ottawa district of the province of Quebec. Here, however, this industry is of comparatively recent date, and is carried on for the most part in the townships of Buckingham, Templeton, Portland, Hull, and Wakefield, in the county of Ottawa. There is no doubt that this mineral is to be met with in a much wider district than the townships above mentioned; but mining it has so far been confined to these localities running in a north-easterly direction from the Blanch river across the Lievere river into the adjoining country east of the latter. This belt is very productive, yielding a very fine quality of apatite.

The following report on the mines of this section, with remarks on the general trade, is from personal observation and the practical experience of those engaged in the trade. The Trade and Navigation Returns for the last five years show the following results of the phosphate exports from Canada during each year, and will at a glance give an idea of the growth of this industry:—

	Tons.	Price.	Value.
1880	7,974	\$15	\$119,882
1881	15,601	15-37½	239,943
1882	17,181	19	327,667
1883	14,478	20-83	302,716
1884	21,471	21	453,322

The price stated in the above as the customs valuation is altogether too low, but the amount exported, with the exception of 1883, has annually increased. It must be borne in mind that this amount does not cover all that is mined in each year, as sometimes large quantities are held over awaiting transport from the mines. This has materially been the case with some of the Ottawa County mines, owing to the bad condition of the roads and other disadvantages, which, however, are now in a great measure obviated by the new branch of the Canadian Pacific Railway running up from Buckingham station to the village, and the landing-point on the Lievere river, to which the mineral is brought down in scows. The railway company has also erected bins at the landing in which the ore is deposited before being placed on the cars, and it is the intention of the company to have steam cranes at convenient points, by means of which phosphate can be transhipped in the summer season direct from the flat boats in which it is floated down to the cars. The River Lievere is a slow, sluggish stream, very deep, and only at one point, where there are boulders in the river, and a ledge of rocks seems to cross the channel known as "Little Rapids," is any obstruction offered to navigation, even at low water after the summer. This, however, is obviated by the phosphate being loaded on flat-bottomed scows, which, drawing very little water, easily pass the rapids, being towed to the head of them by a small steamer, and being taken in tow by another waiting at the foot of the rapids after the scows have floated over, much in the same way as cribs of timber are sent over the slides here or over the various rapids between here and Quebec. As, however, several members of the Dominion Government have within the last year acquired a large extent of phosphate land on the River Lievere, there is every probability that the navigation will be improved, and the boulders removed or a lock constructed, surveys for which have been made for the Dominion Government. As the greater part of teaming and hauling the phosphate from the mine to the river is done in winter, the roads are then best adapted for hauling large and heavy loads, and the snow roads may always be calculated on from early in December, and frequently earlier, to about the 10th of April. During that period any quantity of material can be drawn to the river bank and piled there ready for shipment. This is what was done last winter by all the mines in operation, and where they formerly paid from \$1.50 and \$1.65 per ton for teaming to the railway the same quantity will be carried next summer by water for from 30 to 50 cents. In the early days of phosphate mining in this vicinity, small operators were beset by countless difficulties which materially retarded the development of this industry. But within the last few years it has been stimulated by the investment of foreign capital and the organization of powerful companies composed of men of practical business ability, intelligence, and means. The introduction of steam power and improved machinery, economy in the business management of the mines and the necessity of shipping only a high grade of purity have now placed these works on a sound and permanent basis.

THE EMERALD MINE, one of the earliest of those opened, is one of the most productive, and is worked on thoroughly scientific mining principles. It is situated some 9 miles from the village of Buckingham, and the property on which it lies covers 100 acres. It has changed hands several times, each succeeding purchaser paying higher prices, till the last sale by the proprietor for \$100,000 to the Ottawa Phosphate Company cleared the seller some \$50,000. A drift has been run in the side of the hill to the main shaft, by means of which the refuse as well as the phosphate are run out on a tramway. The mine is well equipped. The workmen's houses and quarters are very comfortable, and the property is well supplied with suitable plant. It is understood that the company now working this mine would not sell it for five times the amount paid for it.

THE WASHINGTON MINE, formerly known as the Lansdown Mine, adjoins the Emerald, and is being worked by a company of American capitalists. Desirous of developing the property they have been preparing on an extensive scale for operations by the removal of a large amount of dead rock, and by so doing deposits of phosphates of considerable extent have been developed. Good results are anticipated.

LITTLE RAPIDS MINE is comparatively new, but the work that has been carried on there already proves it a very valuable property. It belongs to Mr. W. Allan, of Ottawa, who is sparing no expense in developing the well-defined veins of mineral it exhibits, and which have been followed in this mine further than in any of the others. Drifting has been started on the veins at different levels in the shafts with great success. A large number of openings have been made on the property, all of which afford a good show of high-grade phosphate. The mine is situated on the east side of the Lievere river, some 2 miles north of the Emerald Mine, and is very conveniently situated for shipment, being quite near the river. All the buildings on this property are of a substantial character, and everything bears traces of good management.

THE NORTH STAR MINE, belonging to an American company, quite contiguous to the Little Rapids Mine, is yielding handsome returns for the outlay on it, and a very rich show of phosphate has been reached by a system of mining pursued to test the value of the property. A small show of phosphate on the surface, only about 3 in. in width, was selected for the spot where a test shaft should be sunk. At a depth of 100 ft. this small vein was found to have widened out to 5 ft., and at a still further depth it occupied the whole width and extent of the shaft. This shaft has now been carried to a depth of 220 ft. Drifting has been commenced, and a very large yield is anticipated.

THE HIGH ROCK MINE lies on the west side of the Lievere river, some 18 miles from Buckingham village, and is one of the most extensive mines now worked. It belongs to the Phosphate of Lime Company of London, England, under the management of Mr. Pickford, of 148½, Fenchurch-street. The property covers 1200 acres, and the mine has been the most productive of all in Canada, having turned out during the four years of the present company's proprietorship 20,000 tons of high grade phosphate. The profits of the last three years have been sufficient to cover all the outlay, and to admit of a dividend being declared at the

close of last year of 25 per cent. on the capital stock, beside setting apart \$10,000 as a reserve. Improved machinery of every kind and the most skilled methods of mining are used here, steam being exclusively used for drilling and hoisting. Some 26 openings exist on this property, and the show of mineral in each is excellent. Every attention is paid to the comfort of the miners, their eating and sleeping accommodation being most scrupulously looked after, and a reading room well supplied with books, papers, and periodicals is open for the employees in their off time. Tramways along the face of the mountain on which this mine is situated carry the refuse to places where it is easily dumped into ravines, and so out of the way of encumbering the sites of the future probable openings. The deeper works proceed here the richer the veins appear. The view of the surrounding country from High Rock is magnificent. In all directions the Laurentian hills rise one above another till lost in the distance, whilst at the foot of the mountain itself is a beaver meadow of several acres shaded by trees, while to the west of it another valley is seen dotted with settlers' houses, whose residents find a ready market at the mines for everything they can raise.

THE UNION MINES, about 1 mile further south, formerly known as the Star Hill Mines, belong to an American company, of which Mr. Williams, President of the New York Mutual News Company, is President, with offices at 13, Park-place, New York City. The company own about 2000 acres of land, and where only two years ago there was nothing but rocks and unbroken forest, there now are a large number of dwellings, substantial offices and store rooms, tramways, and good roads. The work of mining has here been reduced to a minimum by a steam hoisting power, steam drills, and all the modern appliances. A small lake nestles at the foot of the mountain, on which the principal works are carried on, and a ravine along the edge of which a tramway runs, receives all the waste rock of the mines. The escarpment forming the wall of this ravine shows the course of the phosphate veins as running eastwards, and the properties adjacent to this company's land give evidence of abundance of workable material. The original capital of this company—\$100,000, was nearly all expended in plant, road making, and shaft sinking. Yet after one year's operations a dividend of 30 per cent. was earned and divided amongst the stockholders. The old unbusinesslike system of mining, which characterised the first attempts in this district has now been abandoned. At that time instead of cutting in the hillside, and developing the veins of phosphate operations were commenced at the very top, taking out such material as was easily accessible, and as soon as it became at all difficult to manage the opening was abandoned and another made, water accumulated, and the quarry of small dimensions became a pond. Adits and drifts or hillside openings are easily drained and pumped. Capital and energy are evidencing the practical results attainable thereby, and experienced miners now have no difficulty in distinguishing between a regular vein and a mere pocket. From 15 to 20 tons of rock are often displaced at a single blast, and a blast will sometimes produce 5 or 6 tons of pure phosphate. The advantages to the neighbouring country which these mines afford in the way of expenditure for team hire, food, fuel, and labour are very great, and the industry has now taken such a foothold that future success is ensured. Every year's experience goes far to confirm those who have invested in this enterprise in the opinion that they will get ample returns for their investment, and that there is plenty of field for further and more extended operations. Professor Boyd Dawkins, an eminent geologist, who was out here with the British Association, stated, on his return to England, in a short paper he read on Canadian apatite there, "it would become one of the most profitable resources of this country." In addition to the yield of pure phosphate in large masses frequently large quantities of rich phosphate are mixed with mica, pyroxene, or pyrites, and if shipped in that state the value of the whole would be materially deteriorated. To get rid of this what is known as "cobbing" is made use of. This consists of the separation by hammers—an easy operation, owing to the softness of the phosphate as compared with the intrusive materials—in a hut or "cobbing house." On one side of the building, through or around which solid tables or stands are located, are empty trams or wagons, into which the refuse is thrown as broken off by hand, whilst the phosphate thus cleaned is thrown into another receptacle on the other side. Boys and old men are employed at this work, which no machinery has yet been found adapted to perform, and they earn from 50 c. to 75 c. per day, being paid mostly by piecework. In spite of this system large quantities of phosphate are thrown aside at present, which with an improved system will yet prove of value much in the same way as the early gold workings of California and Australia yielded rich returns when their tailings were again worked over. There is very little doubt that machinery will be invented capable of separating the more disseminated phosphates, which is everywhere more or less apparent in these localities, for phosphate mining here is as yet in its infancy. The actual cost of a ton of phosphate delivered alongside the ship in Montreal is from \$6½ to \$7. This is putting it at its highest figure. I know of a contract in one of the mines, to mine and deliver at Buckingham landing, alongside the cars, at \$5 per ton, the contractor acknowledging at the same time one-half of that to be clear profit. The cost of floating the mineral from the mines to Buckingham in scows ranges from 30 c. to 50 c. per ton. The railway freight thence to Montreal may be set down at \$1, although cheaper special rates may be bargained for. The ocean freight varies from 75 c. to \$1.50 per ton, according as freights are offering, and there have been instances where vessels were glad to carry it as ballast without charge. With a ready market in Liverpool at from \$25 to \$28 per ton, the above shows a large margin for profit, and accounts for the dividend of 25 and 30 per cent. declared by the Union and High Rock Mining Company.

A remarkable feature in the apatite trade of Canada is the fact that, although a large amount of American capital is invested in our mines, almost the whole of their product is shipped to Great Britain and Europe, a trifling quantity only finding its way to the United States. Considerable crude phosphate and a large amount of superphosphate is imported by that country from Britain, and there is every reason to believe that both these articles were of Canadian product reshipped. Mr. Torrance, a phosphate expert, gives as his idea of the reason for this that as American dealers were in the habit of importing from Britain long before our Canadian deposits were opened no effort has since been made to direct from here into fresh channels a trade which was commenced with the English market by men more familiar with that than with the American.

Dr. Sterry Hunt, in a paper read by him before the American Institution of Mining Engineers at Halifax last summer, entitled "Studies of the Apatite Deposits of Canada," remarked that in the near future a large market will be found for Canadian apatite in the United States. The growing demand for high fertilisers on this continent, and the fact that the apatite of Canada may be shipped to the valleys of the Ohio and Mississippi at much cheaper rates than the phosphate rock of South Carolina gives a great importance to these Canadian mines. H. B. SMALL.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. WERNER & CO., of the Stock Exchange and Finch-lane, been dealt in as follows:—City Fire, ½; City Marine, 1¼ to 1½; Employers' Liability, 1½ to 1¾; Guardian, 58 to 59½; Imperial Fire, 151 to 153; Indemnity Marine, 14½ to 14¾; London, 4½; Marine, 29½ to 30½; North British, 32½ to 32¾; Ocean, 6½ to 6¾; Railway Passengers, 8½; Rock, 7½ to 7¾; Union, 550; Universal Marine, 9. Insurances firm.



## GOLD MINING ON THE GOLD COAST, WEST AFRICA.

BY HENRY LOUIS, A.B.S.M., F.I.C., ETC.

*(Continued from page 1409.)*

Before leaving the subject of the opening up of these mines it is necessary that a few words should be said on the old native workings that have been carried on by the negroes, and to point out to how great a degree the existence of these workings has complicated the question of the proper mode of attacking the reefs. It is of course perfectly well known that a very large quantity of gold dust has been exported in past times from this portion of the coast by the traders, and that it still forms no inconsiderable item among the products of the country. Now this gold dust often contains minute nuggets (rarely exceeding a few grains in weight, though larger ones have been known to occur), and these are frequently crystalline and not waterworn. The fact is that much, and probably the far greater proportion, of this dust has been obtained by the natives from the quartz reefs, and not by washing alluvial deposits. It is hopeless to attempt even to guess when the natives first learnt to extract gold from the quartz reefs of their country, but the simplicity of their operations as carried on by them in the interior even at the present day leads to the inference that they must date from a very remote period. Their mode of procedure is somewhat as follows:—Having discovered, probably by a series of experiments, that they are above a rich patch of a gold reef, they sink through the soft country rock small circular vertical shafts about 2 ft. in diameter, and often as much as 90 ft. deep, till they strike the reef. They then attack the reef itself, extracting as much of this as they possibly can, and working it out when it is very rich and the country rock is favourable, into a kind of chamber. It is by no means improbable that they facilitated this operation by some kind of "firing-setting," which process is peculiarly adapted to quartz mining, this mineral being notoriously rendered very brittle by being heated to a high temperature, and then rapidly quenched with water. After extracting all the quartz they possibly could from one pit, they would sink others close to it, and extract more mineral from them until the rich patch was practically worked out; at any rate, as completely as their rude appliances enabled them to. As a result, rich districts are found absolutely honeycombed by these old native shafts, and great care is required in threading one's way through such places. Of course, the natives were entirely unacquainted with any method of timbering their workings, and never seem to have driven adits. It is noteworthy that the same is true of old native workings in many other parts of the world. In sinking their shafts they seem to have been stopped only by deficiency of ventilation, or by water; nor is it even altogether impossible that they possessed some means of hoisting water out of their shafts, and could thus work to some little depth below water level. When the quartz had been extracted and brought to surface it was pounded and rubbed down very fine between two stones, a "muller," and a "bed stone," usually of hard diorite, or granite. This method of crushing the quartz was probably suggested by that of preparing "candy," the staple food of the natives, which is made by crushing maize between a couple of stones, the lower one being a large flat one resting on a kind of wooden tripod, and the other, which is held in both hands, a smaller oblong one; it is almost needless to say that this work is always done by the women. After the quartz had been pounded fine in this very primitive mill it was panned in shallow round wooden bowls by women, who are mostly expert and very painstaking gold washers. From this outline of the native procedure for the extraction of gold two important inferences may be drawn. In the first place, the reefs must have been tolerably rich in gold to have made it worth the while, even of savages, to go through such a tedious and expensive process to obtain the precious metal. The force of this argument is certainly lessened to some extent by the reflection that the labour was in all probability not engaged in voluntarily, but that the unlucky miners were impressed for it by their despotic chiefs, and there is certainly no difficulty in making a profit on mining the very poorest material when the labour costs are absolutely nothing. The second deduction, which has, unfortunately, been only too abundantly confirmed by experience, is that all the richer portions of the reefs will have been removed down to a depth of, at any rate, 90 or 100 ft. below the surface. Any miner will readily understand how greatly the excavations produced by the labours of the natives must interfere with legitimate mining operations down to a considerable depth, especially where the walls of the reef are soft and weak, as these circumstances, moreover, necessitate the employment of unusually heavy timbers in the mine to prevent falls of earth from the old workings and other similar accidents.

The mines of the Gold Coast offer, therefore, in this respect, a parallel case to those of India. It will be found necessary to get well beneath all the old workings, and the reefs will have to be attacked in depth, either by deep adits whenever the configuration of the ground allows of their being driven, or by shafts in other cases, in order to obtain a sufficiently large body of untouched reef to give an adequate return upon the capital of a large company. Such adits and shafts, are, of course, costly undertakings, and could only be properly planned and carried out by experienced mining engineers, having at their command an ample capital. It must be remembered, too, that all this preliminary deadwork is not only costly, but also requires a long time for its efficient execution, and it is, therefore, hopeless to look for an immediate profit from any of these mines, if they are to be opened up in the workmanlike manner that alone can secure a permanent success.

Supposing, however, that the various difficulties above indicated have been fairly overcome; supposing that a mine has been properly developed, with adequate reserves opened up by its dead work; supposing that an efficient mill had been erected on a suitable site, where the quartz from the mine can easily and cheaply be transported to it, where a fair water supply can be obtained, and where there is ample fall for the escape of the mill tailings; supposing, in short, that mine and mill are in thorough working order, it then remains to be seen what would be the cost of getting the quartz and extracting the gold from it. In other words, how rich must a reef be on the Gold Coast to enable it to be worked with a profit? In order to give an approximate answer to this crucial question results and figures obtained in the actual working of several of the mines will be made use of, but generalised as far as possible in such a manner as to admit of a fairly wide application.

The only possible plan of working a mine in West Africa economically is to employ negro labour exclusively for all manual work, skilled and unskilled, leaving nothing but the supervision of it to experienced white men. It is at once evident that the amount of such supervision required will by no means increase in the same proportion as the work that has to be executed, so that large establishments have a great advantage over small ones; in fact, a mining company with a 100-head mill would want a white staff very little larger than that required by one working only 10-heads of stamps, the cost of supervision being thus in the former case little more than one-tenth per ton of what it would

be in the latter. It is needless, therefore, to point out how very greatly the success or failure of mines under these conditions must depend upon the scale upon which their operations are conducted. The European mining staff proper should consist of one mining captain and foremen miners, all of whom should be thoroughly good timbermen, under him. On an average about one white miner will be required to every 30 natives, though this figure must vary greatly according to the nature of the reef and walls. In a mine where there is little or no picking ground, and where only short drill holes can be put in, necessitating frequent blasting, and where the walls are bad, or the reef troublesome, necessitating close and careful timbering, more white miners will be required in proportion to the natives than where opposite conditions prevail; for it goes without saying that no shots should be allowed to be fired, and no timber put in except under the immediate supervision of a skilled white miner, if accidents, and their attendant loss of time and money, are to be avoided. In mines where very heavy timber is required, and especially if there is much pitwork to do, a European carpenter will be required; there ought, indeed, to be one on all large establishments, as good native carpenters are very rarely to be met with. On the other hand, the natives make fairly good blacksmiths, and under the direction of a European mechanic or intelligent mine captain, are quite capable of executing all the ordinary smith's work of a mine.

The white mill staff should consist of an engineer, who must be a good fitter, and one or two stampmen according to the size of the mill; in a few cases a reduction officer may be required, but his duties should, as a rule, be discharged by the manager. The above mine and mill staffs, together with the manager and doctor, the latter being quite indispensable, complete the list of Europeans required for even a large mine on the Gold Coast. It is of the utmost importance that the number of Europeans engaged should be reduced as low as possible. The usual pay of a white miner on the Gold Coast ranges from 10*l.* to 15*l.* per month, and that of mechanics, engineers, carpenters, or stampmen, from 15*l.* to 20*l.*, in addition to their board and lodging, which cost 8*l.* to 12*l.* per month per head. These figures may seem excessively high, but it must be remembered that the climate of the Gold Coast is one of the very worst in the world, and men must, of course, be compensated for the discomforts they have to endure, and the risks they run. About one in four of the men who have gone out to the Gold Coast mines have either died from the effects of the climate or been invalided home dangerously ill or unable to withstand the climate; at the same time, it must be admitted that several of the deaths have been, at any rate, in a measure, due to the intemperate habits of some of the earlier miners on the Coast. Taking the average of all mines, it may be estimated that Europeans are laid up and unable to work through ill health for about 15 per cent. of their time, and that two years may be taken as the longest time that anyone should spend continuously on the Coast. From the above figures, and taking into account the steamer fares to and from the Coast, medical attendance and supplies, and similar minor expenses, the average cost of each European employee may be estimated at 27*l.* per month.

Native labour (consisting of Fantees, Apollonians, Kroomen, Bassamen, and various other tribes) is comparatively cheap; carpenters, engineers, and blacksmiths earn about 3*l.* per month; miners about 2*l.*; and surface labourers about 1*l.*; in addition most of these men receive rations costing about 6*s.* per month. It must be remembered that there are absolutely no beasts of burden on the Gold Coast, and that the only labour available is manual labour; this circumstance necessitates the employment of a far larger number of surface labourers than would otherwise be necessary, and adds, of course, greatly to the expense of working mines on the Gold Coast, particularly if the distance between the mine and the mill is at all considerable. Although the price paid to the native labourers may appear very moderate, the cost of their labour is nevertheless high, owing to its inefficiency, though much depends upon the European foremen they may have over them. The cost of mining a ton of quartz varies in different Gold Coast mines from 7*s.* 6*d.* to 20*s.*, these figures, including native labour and all mine stores, but excluding European supervision. Under favourable circumstances, and in a good average reef, each native miner may be expected to get about 10 tons of stone per month in stoping, where they have to set their own timber, thus making the cost of getting the stone about 5*s.* per ton for labour alone. If much of the stone thus got is barren, and has to be separated by hand, the cost per ton of quartz is much increased, and the large or small amount of hand picking that may be required, is the cause of the wide divergence in the above price per ton of quartz. It thus appears that the cost of getting quartz by negro labour is about the same as that of getting it under similar circumstances by white labour, but this, of course, is only true when the negroes work on European methods under careful European supervision; if left to themselves natives are practically useless as miners, and the apparent economy of reducing or even dispensing with white foremen is far more than counterbalanced by the much smaller amount of work accomplished under these conditions. At the same time it must be clearly understood that the lowest figures above quoted per ton can only be attained when the nature of the reef offers good facilities for economical working, and by giving out all the mining work on contract to the most intelligent and expert of the native miners, picked for the purpose, and by insisting on their carrying out all their work under close and careful European supervision.

On Friday afternoon the neighbourhood of Nant-y-Glo was thrown into consternation by the report, which unfortunately proved to be well founded, that an explosion of gas had occurred at the Rope Pit, the property of Messrs. Barres. Several men were engaged in one of the workings driving a heading, and on the removal of a quantity of earth an inrush of gas took place from an old working. The men engaged were using naked lights, and the gas at once ignited. All the colliers engaged in the workings made for the bottom of the shaft, and signalled the disaster, which of course had made itself felt. At first it was feared that many had been sacrificed, but the men threw themselves on their faces to avoid the flame, and thus escaped. Three colliers, named Bendall, Williams, and Hemus, who were engaged at the heading, were seriously burnt. The condition of the last-named is considered critical. As soon as possible the injured men were got out of the pit and conveyed to their homes, where medical aid was obtained for them. The damage done to the pit is but slight, the force of the explosion exhausting itself. The Rope Pit, as well as the Griffin Pit, and the other pits in the neighbourhood, yield the non-flery coal, and naked lights are as a rule used in them all.

LOCK OUT AT SLATE QUARRIES.—The lock out at the Dinorwic Slate Quarries, Llanberis, continues. The men are determined not to work under the present management and code of rules. Announcements were posted up last week inviting the men to resume work under new rules, the applicants to present themselves at the quarry office. This invitation resulted on Monday in a serious riot. Several thousand men, with their wives made themselves completely masters of the place, ordering the manager, the Hon. Mr. Vivian, his assistants, and several men who had resumed work to leave the quarry. Mr. Vivian and his men left, and the mob dispersed. A strong force of police is being mustered to prevent a repetition of the disturbance.

## CORNISH MINE LEASES—PROPOSED LEGISLATION.

A meeting of the Cornish Mine Leases Committee was held at Tabb's Hotel, Redruth, on Monday. Mr. J. CLAUD DAUBUZ occupied the chair, and those present were—Messrs. T. S. Bolitho, S. T. G. Downing, E. Heard, T. R. Bolitho, W. Pike, F. Harvey, W. Vivian, C. Bawden, J. Haye, W. Rich, A. Lanyon, T. W. Field, T. Pryor, S. Abbott, D. W. Bain, W. Teague, and W. Rich, jun. (secretary).

Mr. T. S. BOLITHO moved, and Mr. W. TEAGUE seconded, that Mr. George Williams be asked to join the committee.—Carried.

Mr. S. T. G. DOWNING moved, and Mr. T. FIELD seconded, that a similar invitation be handed to Mr. T. Cornish, Penzance.—Carried.

Various points in connection with the laws relating to Cornish mine leases were discussed.

Mr. DOWNING remarked that if they wished to be considered practical and not Utopian, they ought to confine themselves to such suggested alterations in the law as would be likely to receive the attention of Parliament. He suggested that they ought to consider the following points:—1. That in the case of original grants, where there were undivided rights, a majority of interest should decide the terms of the lease, the minority to be bound by the same.—2. That in the case of renewal of lease, the lord should not be allowed to impose a fine, but should be obliged to regrant the sett, or pay compensation for unexhausted improvements.—3. That for the settlement of disputes no new court be established, but that arbitrators should be appointed by each side, their judgment to be final.

Mr. TEAGUE referred to the short term (21 years) for which mine leases were granted, and said he was speaking the feeling of miners generally when he expressed a hope that something would be done to fix a longer period. He likewise considered that buildings on the termination of the lease should be first offered the lord at valuation, and if refused by him to be sold by lessee.

After some further discussion, Mr. T. S. BOLITHO moved the following resolution:—"That this meeting, while fully recognising the principle of free contract in the granting of original leases (except in the case of undivided ownership, where a minority of interest holding not more than one-third should be bound by a decision of the majority) is strongly of opinion that the lords should be compelled on the expiration of any mining lease to grant a fresh lease without fine on such terms as two referees, to be named by the Judge of the Stannary Court (or Chairman of Quarter Sessions) may determine; and in the event of a lease being abandoned the outgoing tenant shall be entitled to such compensation as referees may determine for unexhausted improvements of a permanent character; buildings on the surface being the property of the adventurers, with power to remove same in the event of the lord declining to purchase them at a valuation within 12 months, the lord having the right of pre-emption of any land that may have been bought and paid for by the adventurers."—Mr. W. PIKE seconded the resolution, which was carried.

It was further resolved that a copy of the above resolution be sent to each of the lords, together with an invitation to them to attend the next meeting of the committee, for the purpose of discussing the various points of the resolution. The committee will meet again early in January.

The following letter was read, addressed to the secretary, from Mr. H. J. Marshall, Poulton Priory, Fairford, a large adventurer in Cornish mines:—

DEAR SIR,—In reply to your letter inviting me to meet the committee appointed to consider this matter, I have to say that I shall unfortunately be unable to attend; but it is a subject on which I feel strongly, and would beg you to submit to them a suggestion or two that I would make.

1.—That the tenant should have power to renounce his lease at twelve months' notice, as is now usually the case.

2.—That if at the expiry of a lease lessor and lessee cannot agree upon terms of renewal lessee should have claim against lessor or new lessee for value of shafts and levels if the mine be re-worked within five years of such expiry or the working be continued.

3.—Lessee, besides having power as now to remove his machinery, to be entitled to remove all buildings erected by him during his tenancy, subject to lessor's option of taking to them at a valuation.

4.—Lessor to have a claim against lessee for all damage done by him to land or other property of the lessor's to the extent of its monetary value according to valuation, such damage to be claimed, valued, and paid for from time to time during the tenancy as it occurs.

5.—Valuation in all cases to be by valuers mutually appointed, as usual. "Dues on profits" sounds very well, but I do not think it is an arrangement that would work, and I would suggest leaving all terms other than those above-mentioned for settlement between the parties concerned.

I presume it is the intention of the committee to ask for an Act laying down, as not subject to alteration by contract, certain terms between the respective parties in leases of this nature. I would humbly submit that we should ask for no more than we consider absolutely necessary to prevent fraud, and only for that we consider absolutely fair and just between man and man, looking at the question from both sides. I shall wait with much interest for the conclusions arrived at by the committee, and beg to remain, Dear Sir, yours faithfully,

H. J. MARSHALL.

AUTOMATIC RAILWAY COUPLING.—For the past two months some of the goods wagons working the traffic on the South Dock Railway lines of the East and West India Dock Company, have been fitted with a new form of coupling which possesses several important advantages over the ordinary coupling. Not the least of these are simplicity in construction and automaticity, combined with certainty in action. The coupling is the invention of Mr. J. H. Betteley, of 42, Old Broad-street, London, and consists of a long shackle which is attached to the drawbar, and stands out at a slight angle of depression from the carriage or wagon. Connected with this shackle is a hook of special shape, which is attached to a bar running across the carriage front, and having a short lever fixed on either end just outside the buffers. To couple the vehicles they are run together in the usual way, and, on meeting, the shackle on one carriage runs up the shackle on the other and instantly engages with the hook. Thus the shunter has no dangerous work whatever to perform. To uncouple he has simply to depress the lever, which action raises the hook and releases the shackle. The hook is so formed that no matter how much bumping of the carriages there may be, it cannot be freed from the shackle without the intervention of the lever, and the combination, therefore, forms a perfectly safe and reliable coupling. In fact, the whole train can be coupled up automatically, and the engaged hook and shackle then constitute a locking apparatus which prevents the carriages becoming accidentally detached. The coupling can moreover be used on any kind of railway vehicle, and it is of no moment if the couplings are not all on the same level, as the higher shackle will always travel up the lower one and engage with the hook of the latter. The apparatus has been examined and the trucks fitted with it have been severely tested by General Hutchinson and Major Marindin, of the Board of Trade, who have given it their united approval. It certainly appears to be well fitted to supersede the ordinary coupling which has cost so many lives.—Times.

At the present day, however, parties of native miners work in some districts in the interior on their own account, paying the owner of the land, a royalty on the gold obtained. Their mode of procedure is the same as that described above.—H. L.



## NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS.

A meeting of the North of England Institute of Mining and Mechanical Engineers was held in the Wood Memorial Hall, Newcastle, on Saturday, Mr. JOHN DAGLISH, President, in the chair.

## PROPOSED MINING AND MECHANICAL ENGINEERING PLANT EXHIBITION.

The following report was presented with reference to the Exhibition in Newcastle of plant applicable to mining and mechanical engineering:—"The Executive Committee have to report to the Council that it has been decided to hold the Exhibition in the Singleton House grounds, and that the necessary permission for doing so has been obtained from all the parties concerned in its occupation—the City Council, the Durham College of Science, and the College of Medicine. Plans of the building are under consideration. The Mayor of Newcastle has promised to act as one of its Vice-Presidents, and Mr. Amos, who occupies an influential position on the Corporation of the city, has been asked to accept the post of honorary treasurer. Mr. Kenrick Gibbons has been appointed acting secretary. The necessary circulars and advertisements will be issued in a few days."

## PORTABLE ELECTRIC LAMP FOR MINERS.

Mr. JOSEPH W. SWAN exhibited portable electric safety-lamps for miners, and read a paper on the subject. The following is the chief portion of the paper:—"This paper has been written at the request of the President, to explain to the members some of the latest results of an attempt to adapt electricity to the lighting of coal mines. In endeavouring to render practical this new means of coal mine illumination, it has been assumed that the existing method is susceptible of improvement, and that, notwithstanding recent modifications of the safety-lamp, that stage of perfection in pit lighting beyond which there is nothing more to be desired, either in respect of safety or sufficiency, has not been reached. At a meeting of the Institute, four years ago, a form of lamp, which required a separate supply of electricity to be conveyed to it through a flexible cord enclosing two wires, was shown. A member of the Institute criticised the feature of the dependence of the light upon an extraneous supply of electric light in mines would be greatly enhanced if the lamp and the supply of electricity to it could be combined in one apparatus. This opinion seemed to be generally concurred in by the meeting, and it made a strong impression on the writer. Ever since that time he has kept the idea in mind, and has gradually advanced towards its realisation. The result appears in the lamp now shown. Here is a lamp and battery combined, capable of giving during 10 or 12 hours twice or three times the light of a common safety-lamp. On first lighting, it gives the light of two candles, and after 10 hours about 1½ candle. As in the earlier lamp, the light comes from a filament of carbon, sealed air-tight in a small tube, and this tube is protected by a bull's eye of glass, so strong as to be practically unbreakable. The current necessary to render the filament incandescent is generated by cells contained in the case. For regular mine working, these are composed of lead and lead oxide. This kind of cell is what is termed a secondary cell, or one which is re-charged by being connected for a time with an electric generator such as a dynamo. Another kind of cell can be used, composed of zinc and lead oxide, with a special view to the occasional employment of the lamp for exploration in vitiated air. This is a primary cell, and only requires filling with liquid to make it ready to give light. It will sometimes be convenient to have a duplicate lamp within the bull's eye, with a switch connection to enable either, but not both, to be lighted, so that in case a lamp should fall the miner will not be left in the dark. The writer had hoped to have been able to show a fourth modification, in which there are only two cells, instead of seven, to light a lamp. By this arrangement the weight is diminished to within 5 and 6 lbs. Speaking of the weight it is perhaps necessary to point out that that is proportional to the light yielded, and the time during which it is kept up. By taking from the electric lamp as small an amount of light as the ordinary safety-lamp gives, its weight need not much exceed that of the heavier lamps in common use. Believing that a good light was the most important point to be gained, after safety, the electric lamp shown had been to give two or three times the light of the ordinary lamps, and consequently it was heavier; in fact, weight was made subordinate to light, but it is hoped that the weight and size of the present lamp will not be found unhandy. The apparatus could have been made much lighter if it had been permissible to employ a primary battery instead of a secondary one, but it appears to be only allowable to use a primary battery to meet sudden emergencies, and in those cases where there is no dynamo and no regular system in operation for charging secondary batteries. For mine exploration, where the air is very foul, as, for example, after an explosion, which has destroyed the ventilation of the mine, a lamp of this kind with a primary battery, in conjunction with a Fleuss breathing apparatus, will probably be found very useful; and it is worth your consideration whether a certain number of lamps of this type, with a primary battery, ought not to be kept ready to be used in case of accident at every pit liable to a fire-damp explosion. But as a substitute for the ordinary safety-lamp for general underground lighting a battery, which requires each time it is used to have the spent charge emptied out and a fresh charge poured in, and which also requires frequent renewal of the positive plate of each cell, is impracticable. On the other hand, a secondary battery such as the writer has adopted can be charged with even less trouble than attends the trimming of an oil lamp. It is only necessary to insert a couple of wires from an electric main into the charging sockets of the battery, in the manner represented in the diagram, and to leave it there from the time the lamp is handed in at the end of a shift until it is wanted again, 12 or 14 hours after. Hundreds of lamps can be charged at a time in this way, and at very small cost. An engine developing an effective five-horse power, and a dynamo electric machine correspondingly small, would suffice to charge 300 lamps at one operation."

Mr. G. BAKER FOSTER said he knew no objection to that lamp in its construction, and the weight could be got over, as they could be sent in tubs to places where the men were working. The only objection he had to the lamp was that it did not indicate the presence of gas.

Prof. MERIVALE spoke of the great importance of having a lamp which would light the roof of a mine. Mr. Swan's lamp was a great improvement on the one he showed four years ago, and the only objection was that it did not detect gas.

Mr. SYDNEY F. W. WALKER said that Mr. Swan's electric lamp was the only practical lamp of the kind in existence, and he understood Mr. Swan had increased its lighting power since he showed it at the British Association meeting. He agreed that the one drawback was that it did not test gas, but he saw no reason why an arrangement should not be made for doing this.

Mr. STEVENSON thought the lamp rather too heavy for practical purposes, and that the ordinary pitman would refuse to carry it.

Mr. SWAN, replying to the questions, said he could not say what the prime cost of the lamp would be, as only some experimental ones had been made. The cost of upholding the secondary lamp would be not more than 4d. per week by lamp, which he believed was the cost of the ordinary oil lamp per week. As to durability he believed the lamp would last several years. There was a perfect hemisphere of light from this lamp on roof, sides, and front. He explained that he expected to be able to attach an apparatus to the lamp to detect gas. As to its weight he still had hope of being able to reduce the weight.

The PRESIDENT moved a vote of thanks to Mr. Swan for his paper. He pointed out that with the good light given by this lamp it could be placed further away from where a man was working, out of the swing of the pick.

Mr. BAKER FOSTER seconded the vote of thanks, and said that if Mr. Swan could add an apparatus to detect gas he could see no objection at all with the lamp.

Mr. SWAN, in returning thanks, said that he felt very much encouraged by the way the meeting had received the lamp, and he would prosecute the experiments further in the hope that at some

future time—and perhaps not a very distant time—he would be able to show them a still further development of the lamp.

## A NEW SAFETY-LAMP.

A paper by Mr. JOHN DOUGLAS "On a Safety-lamp to burn Colzaline or Oil," and which has attached to it a special extinguishing apparatus.

## LOSS OF LIFE IN MINES.

Mr. W. J. BIRD read a paper on the loss of life in mines. He gave tables of the loss of life from 1851 to 1884 showing that the mortality in coal mines had decreased. On the total of accidents from all causes the mortality is 2.88 per 1000 on the whole period, and it has fallen from 3.51 per 1000 before the Coal Mines Regulation Act to 2.19 per 1000 since, a reduction of 34 per cent. The mortality in the North of England, Derby, and Nottinghamshire is considerably below the average, in Yorkshire and West Scotland slightly under the average, and above the average in South Staffordshire and Worcestershire, more so in North and East Lancashire, and is highest in South Wales.

## LEVELLING STAFF FOR UNDERGROUND WORK.

Mr. R. LINSLEY described an improved levelling staff for underground work. The arrangement of this improved staff consists in the use of a tape coiled on a spring drum, fixed on the top of the main drum. The figures and divisions are painted on this tape as on an ordinary staff, and whatever the height from thill to roof the read is continuous.

## MANCHESTER ASSOCIATION OF ENGINEERS.

The annual meeting of the members of what has previously been known as the Manchester Association of Employers, Foremen, and Draughtsmen, but which by special resolution passed at the above meeting will in future be designated by the title of the Manchester Association of Engineers, was held, on Saturday, at the Grand Hotel, Manchester, Mr. W. H. BAILEY, the President, in the chair.

No paper was read, the meeting, which was numerously attended, being wholly occupied with the election of officers for the ensuing year, the admission of new members, and various alterations in the rules. Twelve candidates for election as members were proposed, and eleven were admitted. Alderman W. H. Bailey, O.E., was unanimously re-elected President for the ensuing year, Mr. Thomas Ashbury, C.E., remaining in the office of past-President, and the remaining offices were filled up as follows:—Treasurer, Mr. H. Mainwaring; trustees, Messrs. G. Carter, E. Asquith, R. Rawlinson, J. Walthew, and Thomas Ashbury; committee (three new members), Messrs. F. Wiswall, T. Wood, and Boswell; auditors, Messrs. J. T. Chancellor and H. Frost, jun.; secretary, Mr. Fred Walthew; assistant-secretary and librarian, Mr. Frank Hazelton. Hitherto the meetings of the Association have been held in one of the large rooms of the Manchester Technical School, but the accommodation here supplied not being adequate for the requirements of the Association, it was resolved that in future the meetings should be held at the Grand Hotel. The remaining business of the meeting consisted in the discussion of several alterations in the rules relating mainly to the admission of members.

Alderman W. H. BAILEY, in briefly thanking the members for the honour they had conferred upon him in re-electing him their President for the ensuing year, said it was a position of which any man ought to be proud, when they remembered the important position which that society had attained. Amongst their members was the Mayor of Salford, and two others—Messrs. Mather and Peacock, had been elected Members of Parliament. During the past year the society had made most gratifying progress. They had had a greater accession of Members than during any previous year. Financially they were also in a better position than at any previous time, and the society was stronger and healthier in every respect than at any previous period of its history.

## IRONWORKS PRACTICE AND COMBUSTION.

At a meeting of the South Staffordshire Institute of Iron and Steel Works Managers, at Dudley, on December 12, presided over by Mr. R. Smith Casson, general manager of the Earl of Dudley's Round Oak Ironworks, Mr. W. J. Hudson, A.P.S., read an exhaustive paper, being a second contribution, "On Combustion." In the first part of his paper Mr. Hudson dealt with the qualities from a combustive point of view of the South Staffordshire coals, and emphasised their special value in blast-furnaces on account of the low contents of sulphur. Afterwards the artificial gases of the Siemens, Casson, Wilson, Dowson, and other producers were dealt with, and the author remarked that a most interesting process of gas production was employed at Herr Krupp's great works at Essen. It was an intermittent process, and the gas was stored in gasholders. Small breeze was the principal fuel, and the gas production was effected in an admirable manner. Noticing the manufacture of true water gas, which was gas produced by the decomposition of steam by solid fuel without the aid of air, or at most a very small amount the author expressed the opinion that this principle of gas production had a wide future before it. Mr. William Crossley, of Glasgow, had patented a combination heating stove and gas producer to work upon this principle. Waste blast-furnace gases received considerable attention at Mr. Hudson's hands. It was distressing to contemplate the amount of waste which had been permitted by not utilising the gases of the older furnaces of the Staffordshire and other localities years ago. The enormous economy which had attended the use of these gases in the North of England was demonstrated by the fact that an average furnace in the North evolved weekly an amount of gas equivalent in its heating power to nearly 2000 tons of coal. A Cleveland furnace evolved on an average 7 tons of gas per ton of pig-iron made, and assuming an average weekly output per furnace of 500 tons the amount of gas evolved would reach something like 3500 tons per week, the whole of which was practically utilised. Sir Isaac L. Bell had estimated the saving in the Cleveland district alone at 1,500,000 tons of coal per annum. It was matter for regret that in South Staffordshire, in times like the present of prolonged depression, advantage had not been taken to the fullest extent of these valuable gases. Mr. Hudson concluded by treating of the natural gases of the Pittsburgh iron district. Whilst coal there was from 4s. to 5s. per ton, and slack 2s. to 2s. 6d., the natural oils were just half the cost. At the Cleveland Chemical Works, Middlesbrough, petroleum was used under the boilers and stills in a specially-constructed furnace, aided by the use of a superheated steam jet, under a patent granted to the principal director, Dr. Sadler. The process had also been successfully applied by Dr. Sadler to the boilers of a large screw steamer.

The discussion was opened by Mr. WILLIAM FARNWORTH, who expressed the indebtedness of the Institute to Mr. Hudson for his exhaustive second paper. The American ironmasters had a great advantage over those of Staffordshire in consequence of their liquid fuel; but they must all hope that, with perseverance and with attention to every point of economy, Staffordshire would be able to hold its own until times changed for the better.

Mr. RICHARD EDWARDS said that Mr. Hudson had evidently gone very closely into the matter, and the subject was one of such importance and extent that it was impossible to deal with it in one evening's discussion. Ironmasters and ironworks managers could not possibly do better than take the blast-furnace as a model of perfect combustion at every stage.

Mr. M. MILLARD proposed the thanks of the Institute to Mr. Hudson and Mr. W. YEOMANS (hon. sec.) seconded, remarking that Mr. Hudson had on every occasion assisted the Institute to the fullest of his ability.

The CHAIRMAN, in supporting the motion, said that the paper had given them food for careful study which should be attended with practical benefit to their industries.

The vote was accorded with acclamation.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr Wm. ARBOTT, of Tokenhouse-yard, are given in tabular form in the Stock and Share List page of the Journal.

## PIT STOPPINGS TO ISOLATE PART OF A MINE ON FIRE.

At a general meeting of the members of the North Staffordshire Mining Institute, held at Stoke-upon-Trent, on Monday evening (Mr. J. STRICK presiding), a discussion took place on a paper on the subject of "Pit Stoppings," which was read at a previous meeting by Mr. A. R. Sawyer, Assistant Government Inspector of Mines, and reported in the *Mining Journal*.

Mr. SAWYER mentioned that in the remarks that followed the reading of the paper he understood Mr. Oswald to state, with regard to a stopping which he described, that it was erected in the intake, not in the return, and that an explosion occurred. He thought that corroborated the remarks which he (Mr. Sawyer) had made in his paper, that it was advisable, where there were two stoppings, to erect one in the return first, because Mr. Oswald's was not the only instance that he had known in which an explosion had come where the stopping was erected in the intake first.

The CHAIRMAN said he agreed with Mr. Sawyer, and speaking from his own experience, which had been considerable in putting up stoppings, he thought the best way was to put the stoppings in the return first, and to get them as near the fire as possible. He also thought that the fewer they had the better. He remembered that some years ago, at the Shelton colliery, stoppings had to be built. He could not say exactly what thickness they were, but they were gradually put up, and 9 in. pipes were allowed to remain open for some time while they were built; then the stoppings were closed simultaneously. When they were putting the first stopping in an explosion occurred, and the men ran away. Explosions occurred at regular intervals, and between the intervals the men worked a short time. At length the explosions ceased, and the stoppings were completed. They remained there to the present day. He agreed with Mr. Sawyer that there was much danger attending the erection of stoppings, and that great nerve and great judgment were required in the work. He thought by the tank referred to in Mr. Sawyer's paper, as the pressure of water increased, the pressure of gas inside would accommodate itself to the pressure in the pipe.

Mr. SAWYER said that was so, and the tank was to be deep enough to counteract any pressure. It filled gradually; that was, the pressure of water in the tank would rise with the pressure of the gas in the workings.

In answer to Mr. COLE, Mr. SAWYER said when he stated that the stoppings should be put in the return, first, he meant closer first. If it became a question of not putting two in at the same time, then he thought it would be advisable to put one in the return absolutely first.

Replying to the CHAIRMAN, Mr. SAWYER said he should advise temporary stoppings before making permanent ones in all cases where there was considerable danger. Just close off the air to prevent it getting in; then wait a time, and if it did not blow out go on building a permanent one. He believed there was a case of a door closed at the last moment having proved to answer.

In the course of the subsequent discussion, Mr. HAINES (the secretary) stated that in the South Staffordshire district where the coal was thick, there had been many gob fires. It was usual in that district to leave damming places, and immediately a side was finished, it was dammed off. He had known places to be opened two or three years after being sealed up, and fire was still alive in them. That was not applicable to North Staffordshire, but it was a moot point whether in North Staffordshire they should not dam off more of their finished workings than they did, or whether they should ventilate them. Some engineers considered one way was better, and some thought the other way was; but if they put in dams they would not have fire.

After some remarks by Mr. OSWALD, in support of the view of Mr. HAINES, Mr. SAWYER said no doubt in most cases old workings that were done with should be closed off. The thing was to do it effectually, for if half done it would be a source of danger.

## THE STEEL AND IRON TRADES, AND WAGES RATES.

The Steel Trade has now made for itself a position of so much importance that it creates its own movements as regards prices and wages quite independently of its older and sister industry—the iron trade. It is not, therefore, surprising to learn just now that a decline in steel prices is to be followed by a reduction in steelworkers' wages. The initiative has been taken by the Scotch steelmasters, and we shall see whether the movement gradually extends to other of the steel centres. Mild steelmasters over the Border have done much, in a perfectly legitimate fashion, to maintain the prices of their plates and other products at a remunerative level by the operation of their Makers' Combination. This combination has not, however, extended south of the Tweed, and has had no influence in preventing low quotations on the part of steelmasters in the North of England, on the West coast, and elsewhere in England, who have been anxious to share in the larger demand that has of late been making itself felt for steel-plates, particularly as needed by the shipbuilders. Determined not to allow their combination to maintain a set of prices higher than is justified by the state of the market, and so play the trade into the hands of their English competitors, the Glasgow steelmakers have recently reduced their quotations for plates by 15s. per ton. Such a reduction places them again well in the front of the districts who are willing to fill orders for mild steel at prices which alone buyers will give. But the makers cannot see their way to thus meet buyers' views without calling upon the workmen to assist them. They have, therefore, given notice to be contractors in the melting departments of a reduction in wages of between 5 and 7½ per cent. The Steel Company of Scotland are the first to test the point with the view, and a number of the melters at the Newton and Blochairn Steelworks have come out on strike. The company is, however, it is understood, supported by the combination, and it is to be hoped that the men will early recognise the wisdom of doing their share to keep orders at home rather than let them go elsewhere, with the inevitable result that they themselves will have to be satisfied with short time employment.

While this is going on in Scotland the Midland ironmasters are calling upon their operatives to similarly help them to do battle against prevailing low prices and competition from another leading iron-making district. Our columns last week recorded the meeting of the Staffordshire Iron Trade Wages' Board, at which the masters preferred their claim for 1s. per ton reduction in puddlers' wages, and a 10 per cent. drop in the wages of millmen. The movement is the more important because it has long been agreed that whenever any alteration in wages takes place in Staffordshire a similar change is effected in Derbyshire, South Yorkshire, Lancashire, Wales, and some other centres. The Staffordshire masters base their claim upon the circumstance that wages in the North of England are at the present time 10 per cent. below those in the Midlands, and that competition from the North is increasingly severe. Selling prices of iron are, they declare, lower than at any time since 1849, and they cannot continue to any longer submit to the heavy handicap which the difference in wages between the two competing districts inflicts. The ironworkers, on the other hand, urge that the conditions of working in the two districts are dissimilar, and that Staffordshire is entitled to receive 1s. 6d. per ton more as puddlers' remuneration than prevails in the North. Further, they argue that if masters are not receiving the prices which they quote in their circulars, as masters declare they are not, they should not continue to uphold a false market basis, but as long as that list is before the market as embodying the professed quotations of the hour they are entitled to receive payment under it. The President has not yet given his award, but it cannot but be that to some appreciable extent the workmen will be called upon by the arbitrator to play their part under the present circumstances of trade in a common-sense and honourable manner.

The debentures recently issued by the New Potosi Company have been fully subscribed for, and work will be vigorously prosecuted. The accounts from the mine are encouraging.



## Provincial Stock and Share Markets.

**CORNISH MINE SHARE MARKET.**—Mr. S. J. DAVEY, mine shareholder, Redruth, writes under date December 17:—Our market has been quiet this week. East Pool shares have fallen  $\frac{1}{2}$ ; South Crofty,  $\frac{1}{2}$ ; Tincroft,  $\frac{1}{2}$ ; and Wheal Bassett, 1. Other mines have not altered very much; very little doing to-day. Following are prices:—Blue Hills, 16s. to 18s.; Carn Brea, 3 to 3 $\frac{1}{2}$ ; Cook's Kitchen, 9 to 10; Dolcoath, 76 to 76 $\frac{1}{2}$ ; East Blue Hills, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; East Pool, 48 to 49; Killfret, 9s. to 11s.; New Kitty, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; Phoenix, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; Pedn-an-drea, 3 $\frac{1}{2}$  to 4; Polberro, 1 $\frac{1}{2}$  to 2; South Condurrow, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; South Crofty, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; South Wheal Franks, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Tincroft, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Trevaunance, 2 to 2 $\frac{1}{2}$ ; West Basset, 3 to 3 $\frac{1}{2}$ ; West Franks, 8 $\frac{1}{2}$  to 9; West Godolphin, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; West Kitty, 7 $\frac{1}{2}$  to 7 $\frac{3}{4}$ ; West Polbreen, 12s. to 14s.; West Wheal Seton, 4 to 5; Wheal Agar, 19 $\frac{1}{2}$  to 20; Wheal Bassett, 5 $\frac{1}{2}$  to 5 $\frac{3}{4}$ ; Wheal Grenville, 16 $\frac{1}{2}$  to 17; Wheal Kitty (St. Agnes),  $\frac{1}{2}$  to  $\frac{3}{4}$ .

—Mr. M. W. BAWDEN, Liskeard, writes under date December 17:—The mining market continues dull and inactive. Shares generally are weaker, being a usual occurrence at this season of the year. Following are prices:—Anderson United, 2s. 6d. to 3s.; Bedford United, 9s. to 10s.; Blue Hills, 14s. to 15s.; Carn Brea, 3 $\frac{1}{2}$  to 4; Cook's Kitchen, 9 to 10; Dolcoath, 75 $\frac{1}{2}$  to 76; Devon Consols, 2 to 2 $\frac{1}{2}$ ; East Blue Hills, 1s. 6d. to 2s.; East Croft, 1s. 6d. to 2s.; East Pool, 48 $\frac{1}{2}$  to 49; Gunnislake (Clitters), 2s. 6d. to 3s.; Killfret, 11s. to 12s.; Marke Valley, 2s. 6d. to 3s.; New Kitty, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; Pedn-an-drea United, 1 to 1 $\frac{1}{2}$ ; Phoenix United, 1 $\frac{1}{2}$  to 2; Prince of Wales, 7s. to 8s.; South Condurrow, 5 $\frac{1}{2}$  to 6; South Crofty, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; South Franks, 7 to 7 $\frac{1}{2}$ ; Tincroft, 5 $\frac{1}{2}$  to 6; Trevaunance Consols, 2 to 2 $\frac{1}{2}$ ; West Basset, 2 $\frac{1}{2}$  to 3; West Franks, 8 $\frac{1}{2}$  to 9; West Kitty, 7 to 7 $\frac{1}{2}$ ; West Phoenix, 2s. 6d. to 3s.; West Seton, 4 $\frac{1}{2}$  to 5; Wheal Agar, 19 $\frac{1}{2}$  to 20; Wheal Bassett, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Wheal Crober, 1 to 1 $\frac{1}{2}$ ; Wheal Grenville, 16 $\frac{1}{2}$  to 17; Wheal Kitty, 1s. to 1 $\frac{1}{2}$ .

—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth, write under date December 17:—The market has fluctuated this week, and closes with a dull tone, and for the time sellers predominate. East Pool and Wheal Bassett have declined 20s. each. No alteration in the standard this week. Closing quotations are as follows:—Blue Hills,  $\frac{1}{2}$  to 1; Carn Brea, 3 to 3 $\frac{1}{2}$ ; Cook's Kitchen, 9 to 10; Dolcoath, 75 $\frac{1}{2}$  to 76; East Blue Hills, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; East Pool, 48 to 49; Killfret, 10s. to 12s.; New Kitty, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; Pedn-an-drea, 3 $\frac{1}{2}$  to 4; Polberro, 1 $\frac{1}{2}$  to 2; South Condurrow, 5 $\frac{1}{2}$  to 6; South Crofty, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; South Franks, 7 to 7 $\frac{1}{2}$ ; Tincroft, 5 $\frac{1}{2}$  to 6; Trevaunance, 2 to 2 $\frac{1}{2}$ ; West Basset, 2 $\frac{1}{2}$  to 3; West Franks, 8 $\frac{1}{2}$  to 9; West Kitty, 7 to 7 $\frac{1}{2}$ ; West Phoenix, 2s. 6d. to 3s.; West Seton, 4 $\frac{1}{2}$  to 5; Wheal Agar, 19 $\frac{1}{2}$  to 20; Wheal Bassett, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Wheal Crober, 1 to 1 $\frac{1}{2}$ ; Wheal Grenville, 16 $\frac{1}{2}$  to 17; Wheal Kitty,  $\frac{1}{2}$  to 1. Tin, 93 $\frac{1}{2}$ .

—Mr. JOHN CARTER, mine shareholder, Camborne, writes under date December 17:—The Cornish share market has been quiet this week, and prices are a little lower, closing as follows:—Blue Hills,  $\frac{1}{2}$  to 1; Carn Brea, 3 to 3 $\frac{1}{2}$ ; Cook's Kitchen, 9 to 10; Dolcoath, 75 $\frac{1}{2}$  to 76; East Blue Hills, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; East Pool, 48 $\frac{1}{2}$  to 49; Killfret, 10s. to 12s.; New Kitty, 1 $\frac{1}{2}$  to 1 $\frac{3}{4}$ ; Pedn-an-drea, 3 $\frac{1}{2}$  to 4; Polberro, 1 $\frac{1}{2}$  to 2; South Condurrow, 5 $\frac{1}{2}$  to 6; South Crofty, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; South Franks, 7 to 7 $\frac{1}{2}$ ; Tincroft, 5 $\frac{1}{2}$  to 6; Trevaunance, 2 to 2 $\frac{1}{2}$ ; West Basset, 2 $\frac{1}{2}$  to 3; West Franks, 8 $\frac{1}{2}$  to 9; West Kitty, 7 to 7 $\frac{1}{2}$ ; West Phoenix, 2s. 6d. to 3s.; West Seton, 4 $\frac{1}{2}$  to 5; Wheal Agar, 19 $\frac{1}{2}$  to 20; Wheal Bassett, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Wheal Crober, 1 to 1 $\frac{1}{2}$ ; Wheal Grenville, 16 $\frac{1}{2}$  to 17; Wheal Kitty,  $\frac{1}{2}$  to 1. Tin, 93 $\frac{1}{2}$ .

**MANCHESTER.**—Messrs. JOSEPH R. and W. P. BAINES, stock and share brokers, Queen's Chambers, Market-street, write under date December 17:—With the exception of some little buoyancy which was displayed on Saturday last, and continued to obtain till about noon on Monday, the tone throughout the English railway market has ruled dull all the week, and prices show an all round depreciation, though in most instances the decline is not severe. The recent supposed indication of trade improvement, which was said to be manifested in iron, and from which great things were said to be expected for rails and other departments of industry, has disappeared almost entirely as a factor in accepted influences on prices of railway securities, at least so far as expression of the opinion publicly is concerned; but it may be that this is the underlying influence which keeps prices from experiencing greater reductions than would probably occur in face of present discouraging surroundings. Railway traffic returns for the week give no impetus to buying operations, and the effect of them is seen in figures further dropping on their announcement. In instances where, besides the general depression, circumstances peculiar to the individual stock tend the same way, the decline is, as natural, is most severe, and amongst these may be classed Lancashire and Yorkshire and Metropolitan. Foreign Government loans, &c., as well as British funds are better. Consols marking on the week a rise of  $\frac{1}{4}$  to  $\frac{1}{2}$ , but India Four per Cent. stock quotes  $\frac{1}{4}$  lower. In Egyptian the changes are somewhat contradictory, as though the preference and Delta Sanah issues quote better by  $\frac{1}{4}$  per cent., the United stock is  $\frac{1}{4}$  lower. Peruvians and Mexicans both turn easier. Argentine Hard Dollar Bonds, Brazilian Five per Cent. (75), Italian (61), Russian (1873), and Turks (group 4), are all more or less higher. Home Corporation stocks, &c., are firm, and what stock is brought to market is readily picked up at or near full prices. The only changes in Colonials are a rise of  $\frac{1}{4}$  each in the Inscribed Stocks of New South Wales and South Australia. The only department in which real activity has been displayed is in the shares of Indian gold mines in which speculation has been very rife, bringing on a very sudden rise in values, a large portion of which, however, has been subsequently lost. The position of the markets in the several departments of miscellaneous shares during the week may be shortly described as follows:—

BANKS quiet, but tone good.

INSURANCE comparatively moderate, business passing, but course of prices downward.

COAL, IRON, &c., and MINING quiet and lower, excepting in gold shares.

COTTON SPINNING, &c., market exhibits no sign of emerging from the dull and lifeless condition in which it has remained for some time.

TELEGRAPH, though little done here, are better, particularly Anglos and Western and Brazil.

TELEPHONES neglected. Unites only changed, and that tone lower. Miscellaneous proper present some noticeable variations, foremost amongst which is the decline in Manchester Carriage and Tramway shares, supposed to be attributable to opposition which has sprung up by buses running penny fares. Bryant and May have again declined, the amount of fall being this time  $\frac{1}{4}$ , or  $\frac{1}{2}$  further than the extent of their recovery recorded last week.

RAILWAYS have dropped all round, and continuously (except on Saturday and half of Monday), but, on the whole, the extent of decline is not individually very decided, save for one or two cases, where causes are at work over and above the general depressed state of the market, in which category may be placed Lancashire and Yorkshire and Metropolitan. The only changes in Colonials are a rise of  $\frac{1}{4}$  each in the Inscribed Stocks of New South Wales and South Australia. The only department in which real activity has been displayed is in the shares of Indian gold mines in which speculation has been very rife, bringing on a very sudden rise in values, a large portion of which, however, has been subsequently lost. The position of the markets in the several departments of miscellaneous shares during the week may be shortly described as follows:—

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have improved. Clydesdale Bank shares have receded from 22 to 21 $\frac{1}{2}$ . Union have improved from 21 13-16ths to 22. Liverpool, London, and Globe Insurance shares have declined from 27 9-16ths to 27 $\frac{1}{2}$ . Royal from 33 to 32 $\frac{1}{2}$ . Scottish Accident have risen from 42s. 6d. to 45s. 6d. American Mortgage of Scotland have improved from 31s. 6d. to 32s. Australasian Mortgage and Agency from 54s. to 55s. Scottish American Mortgage from 60s. to 60s. 6d. Otago and Southland have declined from 38s. 6d. to 38s. Scottish American Investment from 70s. to 68s. 6d. There has been a deal of excitement in mining shares, particularly in Indian mines, and prices advanced rapidly, but have not been fully maintained. Oil shares have changed very little. Land and Cattle shares have been quiet.

### THE COPPER TRADE.

Messrs. HARRINGTON, HOBAN, and Co., Liverpool, in their monthly circular dated December 15th write:—Chili copper charters for first half of this month are not yet to hand. A cablegram, dated Valparaiso 11th, gives the price of bars as \$15.30 with exchange 26 $\frac{1}{2}$ d. During the past fortnight a fair trade has been done in Chili bars at prices ranging from 40s. 2s. 6d. to 42s. 7s. 6d. cash, and 40s. 17s. 6d. to 43s. 5s. for three months' prompt. Market closes quiet at 41s. 5s. for good ordinary brands on the spot. The sales of furnace material comprise:—At Liverpool, 150 tons Quebrada yellow ore at 8s. 3d., 150 tons Italian (to arrive) and 42 tons Portuguese and Venezuelan at 7s. 9d. per unit. At Swansea, 332 tons Bolivian ore, ex Zeta, at 7s. 10 $\frac{1}{2}$ d. per unit. Precipitate: 50 tons Mason's Spanish at 8s. 4 $\frac{1}{2}$ d., 93 tons at 8s., and 58 tons at 8s. 1 $\frac{1}{2}$ d., 20 tons English at 8s. 6d., and 10 tons at 8s. 7 $\frac{1}{2}$ d. per unit. Import of Chili copper from 1st to 15th December 150 tons fine, against 189 tons fine same time last year. Delivery of Chili copper from 1st to 15th December 821 tons fine, against 608 tons fine same time last year. Import of other copper from 1st to 15th December 1827 tons fine, against 1593 tons fine same time last year. Delivery of other copper from 1st to 14th December 982 tons fine, against 880 tons fine, same time last year. The total imports of Chili and other copper into Liverpool and Swansea from the 1st of January to 15th December were 75,857 tons; deliveries during the same period, 69,909 tons fine; for same time last year the figures were 69,703 and 73,975 tons respectively. Arrivals here from the 1st to 15th December of West Coast, S.A., produce:—Pembroke Castle, from Valparaiso, 150 tons bars—At Swansea:—Vil. Stocks of copper (Chilian and Bolivian) in first and second hands on 15th inst. likely to be available, we estimate at:—

	Ores.	Regulus.	Bars.	Ingot.	Barilla.
Liverpool	—	511	25,773	170	—
Swansea	—	2,461	5,902	—	—
Total	—	2,972	31,680	170	—

Representing about 33,187 tons fine copper, against 33,858 tons 1st inst.; against 23,965 tons December 15, 1884.

Tin.—Market closes quiet at 93 $\frac{1}{2}$  10s. for Straits, 94s. for Australian, 97 $\frac{1}{2}$  for English, and 70s. to 87s. for Peruvian, according to quality.—Lead: Market steady at 12s. 10s. to 12s. 12s. 6d. for ordinary shipping brands, and 12s. 2s. 6d. for Spanish without silver.—Spelter: Market firm at 15s. for ordinary Silesian brands.—Quicksilver: Market quiet at 6s. 5s. per bottle for firsts and 6s. 2s. for seconds.—Bar Silver: 47d. per ounce standard, nominal.

Messrs. HENRY BATH and SONS, write under date December 16:—The Chili charters for the first half of this month have just been advised as 1200 tons fine copper. Recent quotations from the coast give price as \$15.30 with 26 $\frac{1}{2}$ d. exchange. Statistics for the fortnight show but little alteration in stocks, both deliveries and imports being small. Total visible supply has, however, increased 255 tons to 56 576 tons fine, owing to the last heavy charters of 2300 tons being now taken into the figures. It is satisfactory to note the small arrivals of American copper—824 tons into England, and 140 into France, = 764 tons fine. The American market continues to look for an upward movement and prices there are considerably above shipping point. The time is now fast approaching when a decision will be taken as to railway rates for the coming year. If, as is anticipated, a heavy advance takes place, the recent rise in copper will not help the Montana mines to any extent. We close with a steady market for bars at 41 $\frac{1}{2}$  5s. to 41 15s. cash. The demand for raw copper shows a slight improvement. Furnace material is not plentiful, but smelters are inclined to buy except at a very moderate price. The only sales during the fortnight have been about 200 tons various ores at 7s. 9d., 330 tons Bolivian ore at 7s. 10 $\frac{1}{2}$ d. and about 350 tons English and Spanish precipitate at from 8s. to 8s. 6d. per unit.

	Imports.	Deliveries.	Stocks.
Chili copper at Liverpool, Swansea, and in France	153	839	34,111
Foreign copper in London, chiefly Australian	32	35	4,946
American copper at Liverpool	624	633	1,331
Other copper at Liverpool and Swansea	123	333	3,378
American copper in France	140	210	510
Other copper in France	20	20	30
Tons fine copper during the fortnight	2 69	2046	44,875
Against tons on the 2nd December, 1885	4026	4974	44,853
Against tons on the 17th November, 1885	5740	5772	45,801

Imports.—At Liverpool, Pembroke Castle, from Valparaiso, 150 tons bars.—In France nil. Total 150 tons bars = 150 tons fine.

From Mr. JOHN B. REYNOLDS:—The extraordinary movement in various gold mine shares has literally absorbed the markets for such securities during the past fortnight. Whether the excitement has been real or not is another matter altogether. Money is a very valuable commodity; but there are limits even to its worth. However, as long as the public endorses this kind of thing so long will there be a central combination to indulge such speculators. It is very suggestive to compare the prices of such concerns with the prices of dividend Cornish mines in the market, for the shares of which there is certainly no excitement, but where the dividends are forthcoming with a regularity than which nothing can be more satisfactory. Not only so, but there is every reason to believe that, with an improved price for tin, and with the additional discoveries which are almost certain to be made in the properties themselves, the shares, in my opinion, will have a very considerable advance; indeed, it is noteworthy that at the present moment, not only dividend shares, but progressive Cornish mine shares, are being picked up very freely and quietly. Every West Polbreen share which has been offered on the market, for instance, has been taken, and why? Simply because the mine is selling for about 4000 $\frac{1}{2}$ , which on a discovery which, in the opinion of those who are qualified to judge, is certain to be made, would run the value of the property up to something like 30,000 $\frac{1}{2}$  in a week, and at this it would be dirt cheap. There are other mines which might be mentioned, and which in due time will have a very extraordinary rise in value, but which have been entirely overlooked because of the furore in the gold mine market.

### Obituary.

The death is announced of Mr. Alexander Blythe, the secretary to the Northumberland and Durham Miners' Permanent Relief Fund. With a view of recruiting his health, Mr. Blythe sailed from the Tyne, in October last, on board the screw-steamer W. B. Ferguson, on a voyage to the Mediterranean. He proceeded as far as Alexandria; and staying there for some time, he visited many of the places of archaeological and modern interest for which that region is so famous. In his letters home he wrote in the most cheerful and hopeful strain, and had reached Gibraltar, when he was taken suddenly ill. On Sunday morning a telegram brought the intimation that Mr. Blythe had died the previous night.

The death of Mr. Thomas Morris, at the good old age of 81, for more than a generation the managing director of the Devon Great Consols in their palmy days, recalls vividly the memories of a prosperity which at one time seemed as if it would hardly have an end. Mr. Morris was associated with the mines from their rise, through their almost unparalleled wealth, up to the time when a change came over their fortunes, soon we may hope to be reversed by a return to the good old dividend days. Not that we may expect much from copper in the present state of affairs, but that we see no reason to doubt that tin will repeat what was done by copper. The probability is that the day is not very far distant when the pluck and perseverance of the present adventurers here will be amply rewarded, though Mr. Morris did not live to see it.

It will be a matter of deep regret to all, and a serious loss to thousands, that the Ystalyfera and Gwmos Works have been brought to a standstill. At the Ystalyfera Works the whole process of producing the tin-coated iron sheet was gone through from getting the iron from the ore to the boxed plates. At one time, in the lifetime of Mr. James Palmer Budd, there were about 4000 hands employed, but the number is a great deal less now. Ystalyfera is chiefly dependent upon these works; the outlook, therefore, is serious indeed for the inhabitants of the district. Some hopes of its early re-starting existed whilst the blast-furnaces continued to be worked, but on their being extinguished and blown out on Wednesday evening those hopes were dispelled. This important cessation will have a most injurious effect upon several smaller works in the district. It is now rumoured that the Gwmos Tinplate Works will restart again on Monday morning next.

### NEW CHILE GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that the COUPONS falling due on the 31st December, 1885, of the DEBENTURE BONDS of this company will be PAID on and after that date at the office of the Clydesdale Bank (Limited), 30, Lombard-street, E.C. For the New Chile Gold Mining Company (Limited.)

No. 32, Queen Victoria-street, E.C. J. B. COX, Secretary.

**ORGANOS GOLD MINES.—THREE £5 DEBENTURES FOR SALE,** together with a bonus of £20 per cent. in addition to accrued interest at 15 per cent. since November 2, 1882.

Apply at HOLBIN'S, Stationer, Earl's Court.

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**MR. HENRY TAPP, 41, ST. MAUR ROAD, FULHAM LONDON, S.W.**



**THE MONTANA COMPANY (LIMITED).**

4, King William-street, London, E.C., 16th December, 1885.  
The Directors having notified their intention to PAY OFF the REMAINING MOIETY of the DEBENTURES on the 24th inst., Debenture Holders are requested to send in to the office of the company the Debenture Bonds held by them on or before SATURDAY, 19th inst., together with the coupons attached, including that payable on the 25th inst.  
Cheques for the balance of the principal sum due on the Debentures and interest for the three months to 25th inst. will be forwarded to the Debenture Holders on 24th inst.

By Order, THOMAS NEAL, Secretary.

**NOTICE.**

**THE TREGONTREES AND OLD POLGOOTH CONSOLS MINING COMPANY (LIMITED)—IN LIQUIDATION.**  
TENDERS are hereby INVITED for the PURCHASE of the LEASE of the MINES belonging to the above named company, together with the PLANT, MACHINERY, &c., now thereon. The whole to be sold as a going concern.  
Tenders to be forwarded on or before December 31st, 1885, and addressed to the Liquidator, SYDNEY HODGKINSON, 15, Great Winchester-street, London, E.C.  
Dated this 19th day of December, 1885.

BY ORDER OF THE LIQUIDATOR—MIDFORD, NEAR BATH.  
FULLER'S EARTH WORKS.

**MR. W. B. HALLETT** is favoured with instructions TO SELL, BY AUCTION, at the Auction Mart, Tokenhouse-yard, in the City of London, E.C., on TUESDAY, January 5, 1886, at Two o'clock precisely, in One Lot, the valuable LEASE, MACHINERY, PLANT, GOODWILL, and PATENT RIGHTS of the

**MIDFORD FULLER'S EARTH WORKS (LIMITED)**

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Particulars and conditions of sale may be had at the Royal Hotel, Bath; of Messrs. DOLMAN and FRITCHARD, solicitors, 3, Laurence Pountney Hill, E.C.; of Messrs. LICKORISH and BELLOD, solicitors, 11, Queen Victoria-street, E.C.; of Messrs. KIDSON and HANNING, Chartered Accountants, 51, Gresham-street, E.C.; at the Mart, E.C.; and of the Auctioneer, 11, Queen Victoria-street, E.C., and 275, Holloway-road, N. (Telephone Nos. 1809 and 7533.)

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TO BE SOLD, BY AUCTION, by Messrs. JOSEPH COCKSEY and Son early in next year (unless previously disposed of by private contract) the time and place of sale to be named in future advertisements.

For further particulars, apply to Messrs. BOYDELL, TAYLOR, and FLINT, Solicitors, Chester; Messrs. COOPER, Solicitors, Newcastle, Staffordshire; Mr. R. MACKAY, 3, Lothbury, London, E.C., and the Clough Hall Ironworks and Colliery Offices, Kidsgrove, near Stoke-upon-Trent; or to the Auctioneers, 20, Paradise-street, West Bromwich.

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TO BE SOLD, BY PRIVATE CONTRACT, as a going concern, a COLLIERY in Glamorganshire, situated about midway between the shipping ports of Cardiff and Swansea, adjoining to and having commodious sidings in connection with the Great Western Railway system.

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There are two pits sunk on the property, both of which are fitted up with winding machinery, but only one is used at present for raising coal. The colliery is ventilated by a Waddle fan. On the surface is erected an excellent pair of horizontal air compressing engines, by John Fowler and Co., of Leeds, for driving the hauling engines underground.

There is also a large number of coke ovens, coal washing apparatus, &c., in connection with the colliery.

The quantity of coal now worked is about 1300 tons per week, but this could easily be considerably increased.

The plant is of modern description, and capable of dealing with a much larger output.

For further particulars apply to Messrs. BASSETT, BASSETT, and LEE, Civil and Mining Engineers, Church-street, Cardiff.

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ONE 25 horse power semi-portable ENGINE; loco boiler; ONE Hall's multiple action STONE BREAKER, 21 inch x 10 inch; ONE 30 inch CRUSHER complete; ONE 20 inch crusher; DRESSING MACHINERY, consisting of two self acting jiggering machines with four compartments; four ditto with three compartments; two ditto with two compartments; self acting classifiers and feeding apparatus; six round buddles; two very substantial sheds for buddles and jigger houses; complete rock drilling plant; 60 feet diameter water wheel x 3 feet breast; one 40 feet ditto x 3 feet 6 inch breast; two 25 feet ditto x 3 feet 6 inch breast. Within 2½ miles of railway station, and convenient for removal.

Very powerful crusher, rolls 30 inch x 16 inch wide will crush 8 tons per hour, all modern improvements; ditto, rolls 24 inch x 15 inch; self-acting feeding hopper to each; Shield's Patent turbine, 20 inch x 14 inch wheel, with 20 inch diameter inlet and outlet; vertical boiler, 8 feet 5 inches high x 3 feet 2 inches diameter with 30 2½ inch tubes, and fitted with Green's Patent Water Heats instead of fire bars; second hand vertical boiler, 4 feet 6 inch diameter, 10 feet high, fitted with 55 2½ inch tubes; shell and fire box in excellent condition, shell ½ inch thick, vertical seams, double riveted; two new four compartment self-acting jiggering machines; table engine, ¾ inch cylinder, 2 feet stroke, very strong in all the parts and equal to new.

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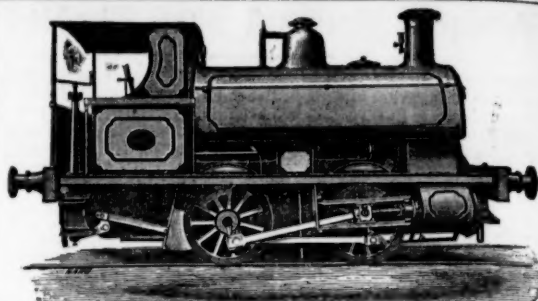
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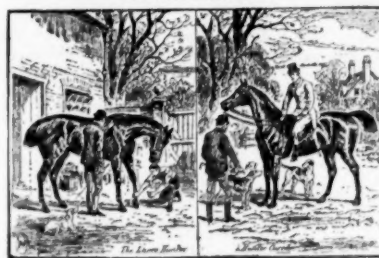
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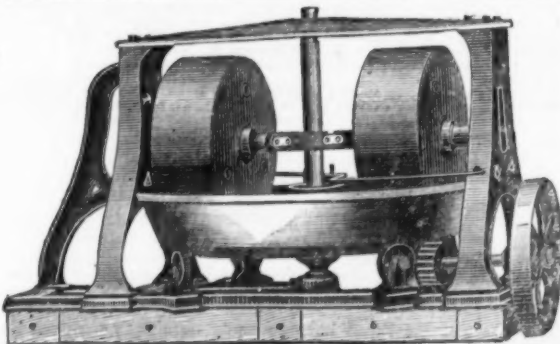
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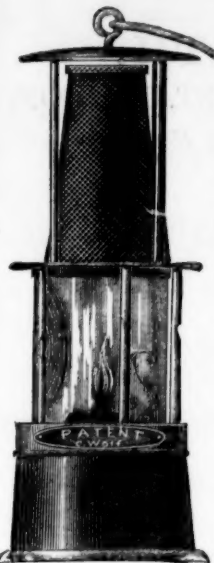
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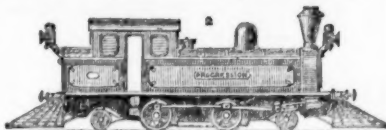
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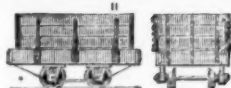
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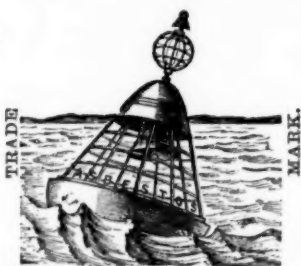
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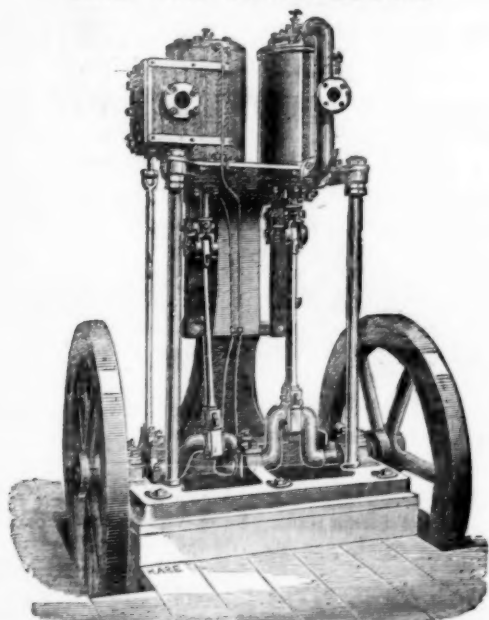
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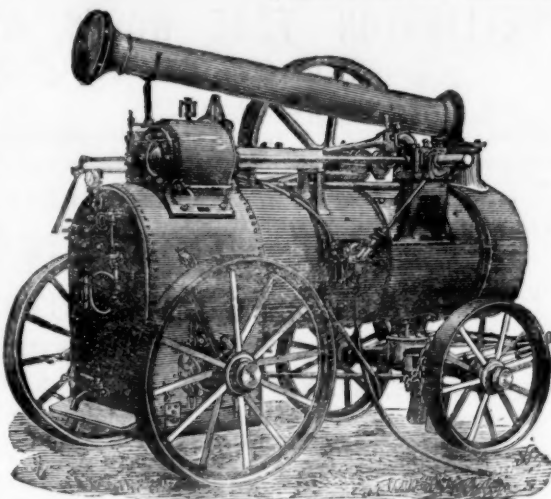
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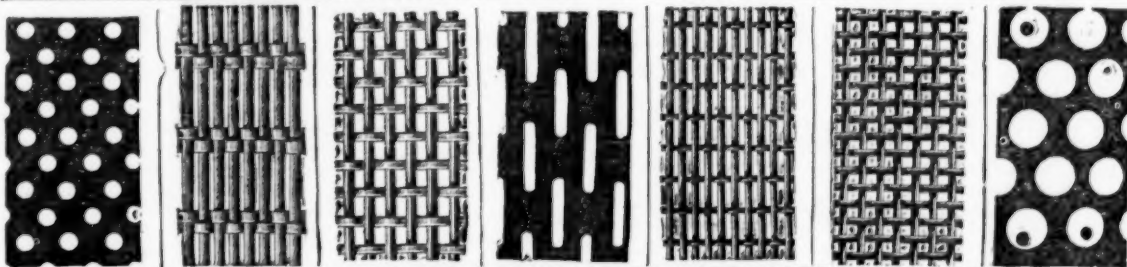
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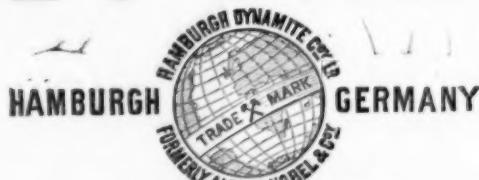
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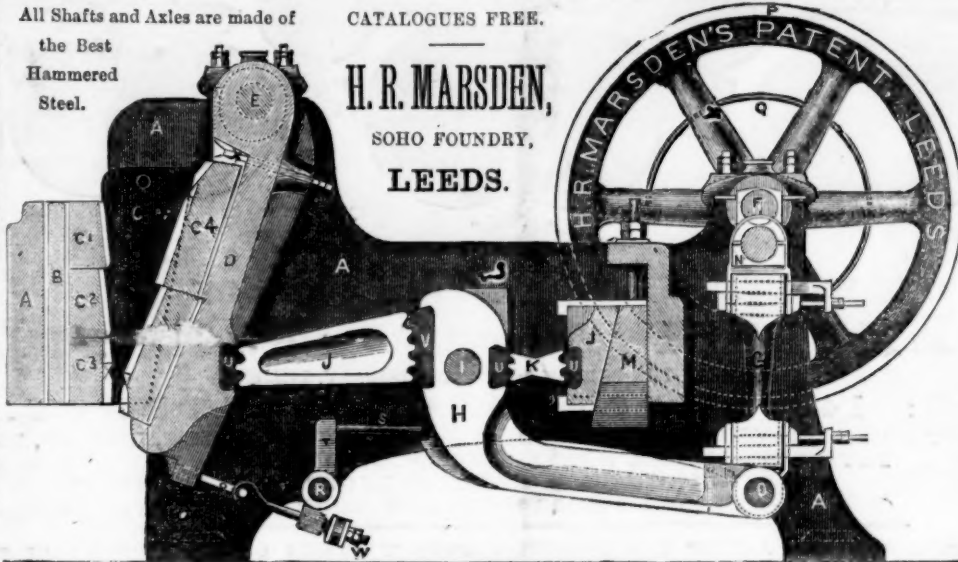
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## STONEBREAKERS AND ORE CRUSHERS TESTIMONIALS.

"We have great pleasure in testifying to the efficiency of the 15 in. by 8 in. Lever Hand Hammer Motion Stone Breaker you supplied us with. We find that our 4 h.p. Engine with ease drives it 250 revolutions per minute, and breaks six tons per hour of the hardest 'Diorite' Whinstone: the sample is much better than any hand-broken we have ever got done. Our Mr. F. J. GRAHAM, C.E., who was Surveyor of Highways for ten years, before joining our firm, says: 'It is by far the most economical machine he ever had to do with; he had two of your former make, and two of another firm's make; compared with these four machines your new patent gives the following advantages:—The horse-power required to drive is exactly 40 per cent. less. The sample of the broken macadam is so far superior to that broken by other machines, and even to that broken by hand that we can make no comparison. It is by far the best sample we have ever seen.'"

"I now order three of your Stone Crushers, size 15 by 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 24x13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and I could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased eleven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

## JOHN CAMERON'S

FLY-WHEELS ON BOTH SIDES.

## SPECIALITIES ARE HIS STEAM PUMPS FOR COLLIERY PURPOSES.

Specially adapted for forcing Water any height

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Of which he has made over 9000.

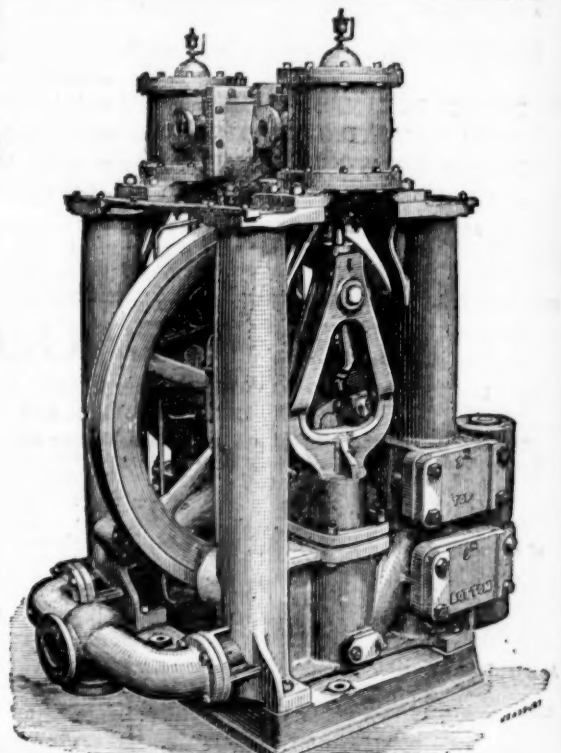
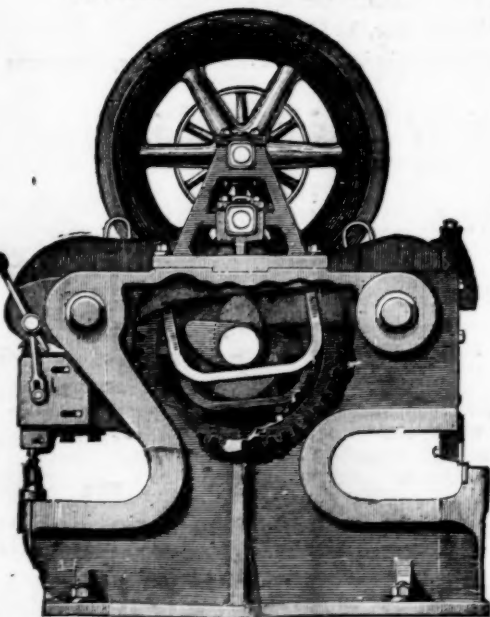
ALSO, HIS

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"JURY" Whisky, 5 years old, 3s. 6d. bottle; 42s. dozen.  
"SPECIAL JURY" Whisky, 7 years old, 4s. bottle; 48s. dozen.  
"GRAND JURY" Whisky, 13 years old, 5s. bottle; 60s. dozen.  
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